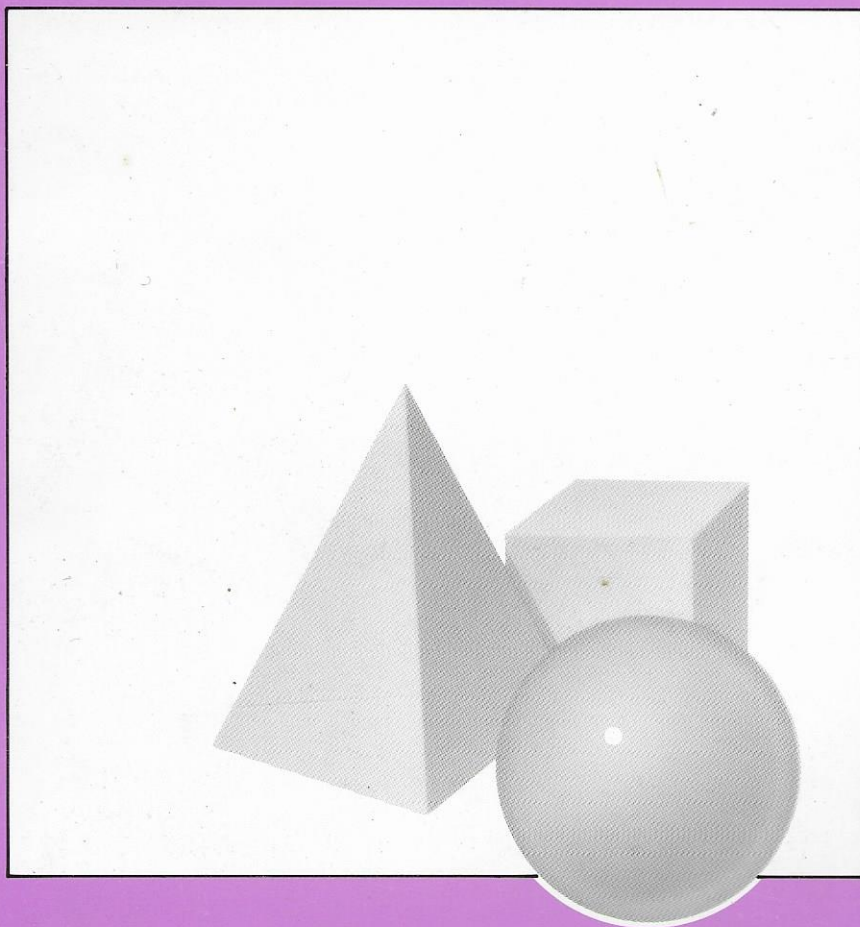


GUIDE TO THE BA degree programme

for applicants who want
to begin their studies in **1990**



GUIDE TO THE BA DEGREE PROGRAMME

for applicants who want
to begin their studies in

1990

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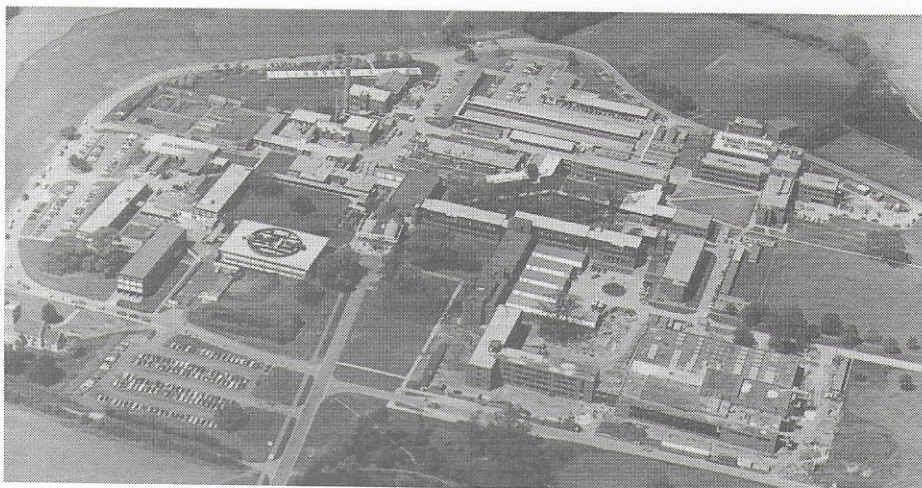
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The University's application period for admission to the BA degree programme in 1990 closes on Friday 29 September 1989. The earlier you apply the better are your chances of getting a place.

The Open University was established by Royal Charter in May 1969. Like other British universities, it is empowered to grant its own degrees. It is also charged with a responsibility to further the educational well-being of the community as a whole.

While every effort is made to ensure accuracy, the information in this *Guide* is subject to later alteration or amendment in the light of policy changes or of financial or other constraints.



An aerial view of the Open University's headquarters in Milton Keynes.

The Open University
Walton Hall
Milton Keynes MK7 6AA

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INTRODUCTION: YOUR CHOICE OF STUDY OPPORTUNITIES

This booklet deals with the Open University's undergraduate programme - that is, with courses leading towards a BA degree. There are no entry qualifications and you can study at home, in your own time. It will probably take you between three and six years to achieve your degree.

If you are already certain that this is what you want, you can skip the rest of this introduction and begin reading the details on page 6. If not, you may like to think for a few moments about the range of educational opportunities open to you, both in the Open University and elsewhere. Taking any course of higher education will require a major commitment of your time, energy and resources, so it is important that you make the right decision at this stage.

Everyone has their own reasons for studying. It is worth considering your own motives. For example, do you want

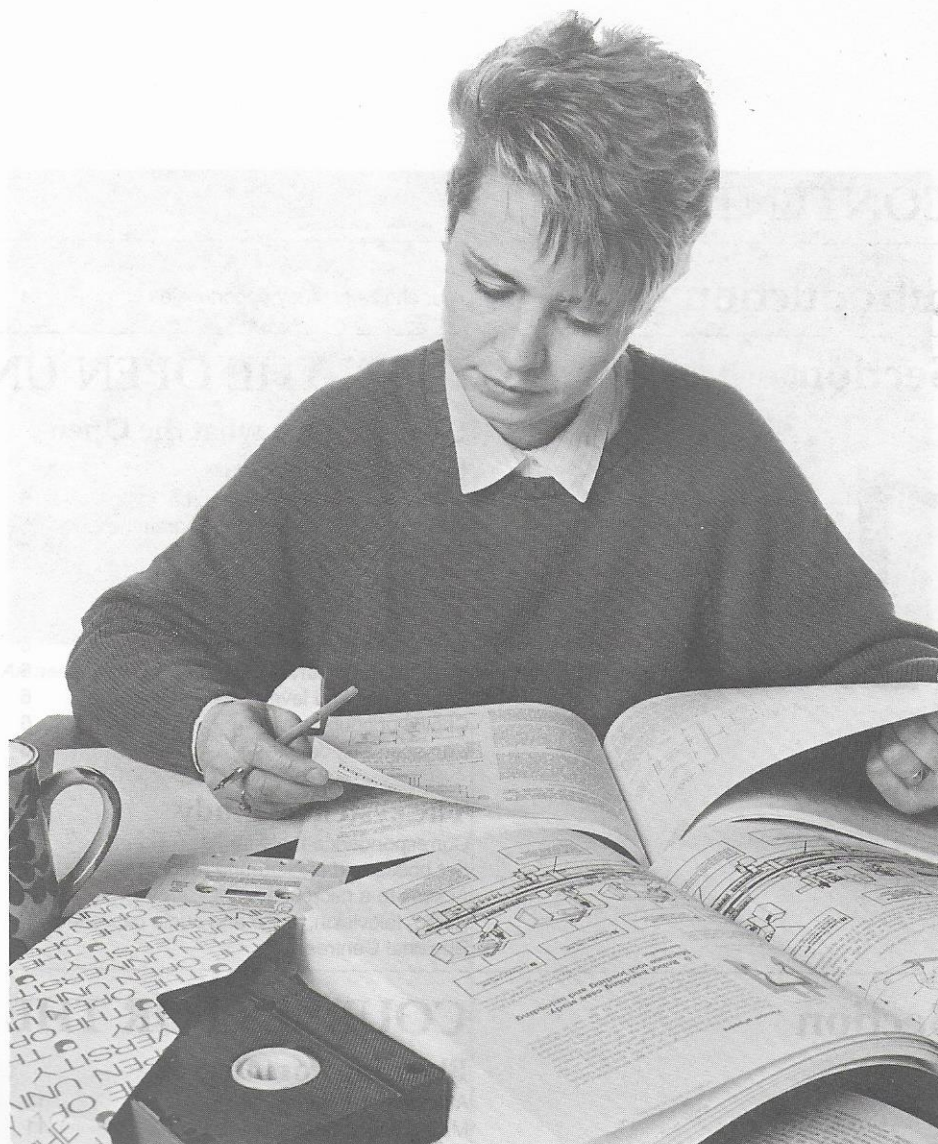
- to extend your knowledge of a particular subject?
- to develop a new interest or generally enlarge your horizons?
- to enjoy the challenge and stimulus of university-level work for its own sake?
- to acquire a degree for personal satisfaction - or for career status?
- to obtain a professional qualification?
- to update an existing qualification?
- to further your career or change your occupation?

Your answers may help you to decide what kind of study is best for you. For example, if professional qualifications and career advancement are important, you should be clear that no university degree is in itself a qualification for a job - although employers usually regard it as evidence of intellectual ability, and in certain cases it may exempt you from some or all of the stages of a professional qualification.

If you have a particular qualification in mind, it would be sensible to check with the appropriate institution as to what kind of courses or degrees they recognize.

In some circumstances a single specialized course or series of courses may be more appropriate to your needs than a full degree. (It is also possible that if you do embark on an Open University degree, a number of courses successfully passed may lead to career progress before you actually graduate.)

Think also about your own circumstances and how you want to study. Can you free yourself from work or domestic commitments in order to study full-time? Or will you have to fit your education part-time into the rest of your life? If so, how much time can you spend on your studies each week? Over what period are you prepared to commit yourself - a few weeks or months, a year at a time, several years? And



With the Open University you study at home in your own time...

what is your starting point: have you any educational qualifications, and how long is it since you last studied seriously?

If you can be reasonably clear about your motives and circumstances, you should be better able to judge which kind of education is appropriate for you.

A full-time degree course at a university, polytechnic or college may suit those who want to study a fairly specialized subject, who have the appropriate entry qualifications, and who can detach themselves from other commitments for two, three or four years.

A part-time degree can be taken with the Open University, as described in this booklet, or with a number of other universities, polytechnics and colleges - but at other institutions you will usually need to have the appropriate entry qualifications and a commitment to attend for a certain number of hours.

The range of **individual courses** is very wide. Some are vocational, some are not. They may be provided as short residential courses, as a series of lectures, as self-contained learning packages, or as correspondence courses. Remember that the BBC and ITV provide a range of courses which combine radio and/or television programmes with written publications. The Open University itself offers a very wide range of single courses (described

in detail in a companion booklet to this one entitled *Open Opportunities*, which you can send for using the card enclosed).

We hope that this has helped to put the Open University undergraduate programme into context - though it may also have raised many more questions in your mind.

Where can you find out more about the various educational opportunities? A good starting point is your local library. Many central libraries have access to the Prestel viewdata system, which offers information about higher education courses throughout the United Kingdom. Prestel Page *888# leads to the ECCTIS (Educational Counselling and Credit Transfer Information Service) database which has records of more than 20,000 higher education courses. Alternatively you can telephone or write to the ECCTIS office at PO Box 88, Walton Hall, Milton Keynes MK7 6DB, telephone 0908 653365 or 653603. ECCTIS also publishes an annual directory of local educational guidance services for adults.

The Regional Enquiry Service at your local Open University centre (addresses on pages 28 and 30) will also be prepared to give general information and guidance. Your local education authority, employer, trade union or professional body should be able to help within their own particular areas.

Now, to find out more about what the Open University can offer you, read on.

HOW THE OPEN UNIVERSITY WORKS



...but you also have the opportunity to join other students at study centres and summer schools.

BASIC CHOICES: WHAT THE OPEN UNIVERSITY OFFERS

- 1 **The Undergraduate Programme**
leading to the BA or BA (Honours) degree
- 2 **The Continuing Education Programme**
a wide range of courses of varying lengths and types
- 3 **The Postgraduate Programme**
leading to the BPhil, MPhil, MA, MBA, MSc, PhD and other higher degrees

Every resident of the United Kingdom aged 18 or over is eligible to study with the Open University. That is why it is called 'Open' - it is genuinely open to everyone. You need no prior qualifications, no O or A levels or other certificates. Admission is basically first-come first-served, so the earlier you apply the better your chances.

Undergraduate

You can enter the Undergraduate Programme, beginning your studies in February 1990 and taking a series of courses over a period of years to gain a Bachelor of Arts (BA) degree. You have a choice of courses in the sciences, technology, arts and humanities, mathematics, social sciences and educational subjects.

This programme is described in this booklet.

Continuing Education

You can register for individual courses in the Continuing Education Programme. These vary

in length from a few weeks to nine months and begin at various times of the year. In addition there are a number of self-contained learning packs.

The Continuing Education Programme includes single courses from the undergraduate programme as well as many courses dealing with new technologies and new thinking for professional and scientific updating, and management training. Some of these may count towards the award of diplomas. There are also a number of 'community education' courses, written in straightforward style and dealing with such everyday matters as parenthood, personal health, consumer decisions, and social issues. Most of these last eight weeks. Community education courses are available to those aged 16 or over.

This programme is described in a companion booklet entitled Open Opportunities, available on request by using the reply card enclosed with this booklet.

Postgraduate

If you already have a degree the Open University offers opportunities to take a taught or research-based higher degree.

For further information write to the Central Enquiry Service, PO Box 71, Milton Keynes, MK7 6AG, if possible specifying your interests.

THE BA DEGREE

If you are aged 18 or over and resident in the United Kingdom, you are eligible to become an undergraduate student of the Open University. There are no other entry qualifications.

Like most universities, the Open University awards its degree to undergraduates who have successfully studied over a number of years. Unlike most other British universities, however, it does not require students to decide from the beginning which particular line of study they are going to follow. You can put together your degree from a range of about 130 courses, choosing what you want to study from year to year.

Courses are rated as 'half-credits' or 'full-credits', depending on the amount of work they require. All last nine months, but a full-credit course will take on average 12 to 14 hours of work a week, while a half credit takes 12 to 14 hours a fortnight.

Six credits are needed for a BA degree, and eight for a BA (Honours) degree. The degree is called a BA (Bachelor of Arts) whether you take arts-based or science-based courses or a combination of both. It is recognized as equivalent in every way to a degree from any other British university.

Why take a degree?

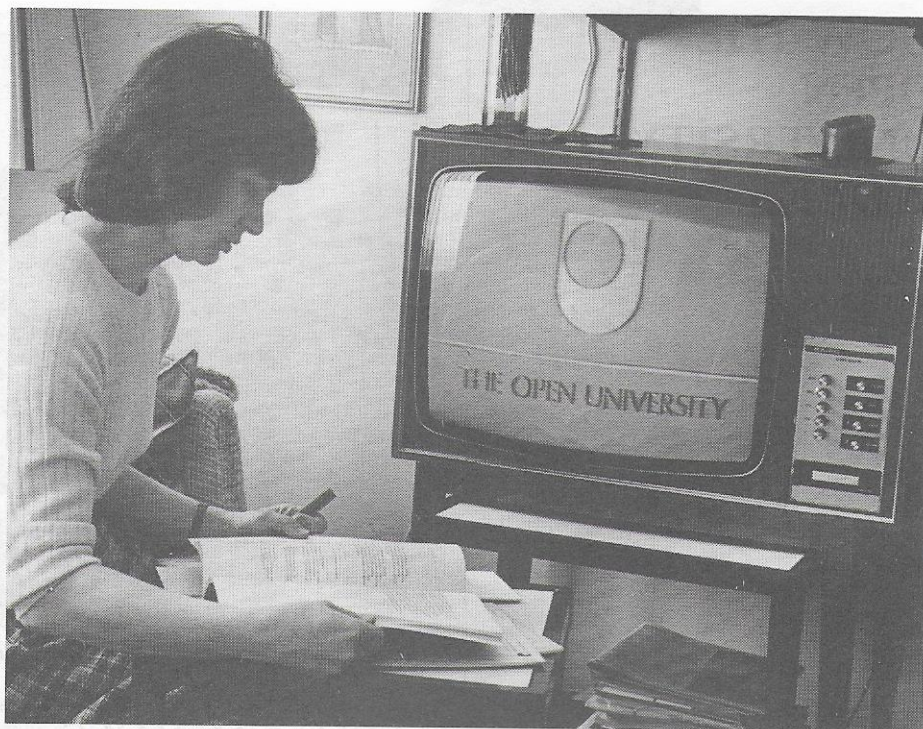
Most people would agree that the real value of a degree lies in the work you do to achieve it: both the knowledge you acquire and the intellectual disciplines you develop. For many people this personal growth is reason enough to want to take a degree. For others there are also vocational implications. An increasing number of occupations demand graduate-level education. There are also specialized fields where the right kind of degree may help to gain professional recognition.

Open University degree studies are extremely flexible. For example, having acquired a number of credits you can take one or more years off to concentrate your energies on your career or on acquiring some professional qualification, then return to complete your Open University degree.

How long it takes

If you take two full-credit courses a year, the maximum allowed, you can gain your BA in three years, and an honours degree in four. Many students, however, find that one or one-and-a-half credits a year is the most that is compatible with other commitments such as work and family. This enables them to complete a BA degree in four to six years.

You can do it in less time if you are granted 'advanced standing' in recognition of successful previous study at higher educational level (see page 10). On the other hand, you can take longer if you wish; in some years you might prefer to take only a half credit, or you may want to take a year or more off. You don't have to decide all these things when you first register but can make a new choice each year about the courses you want to study in the following year.



Television and radio are important components on most courses - and increasingly, other audio-visual media are also being used.

Study areas and levels

There are six main study areas or faculties: Arts and Humanities, Education, Mathematics, Science, Social Sciences and Technology. Each of these provides a range of undergraduate courses at different levels.

There are also several courses which are topic-based and range widely across subjects and disciplines; these are sponsored by the University as a whole and are known as U-courses. A general description of the complete range of courses is given on pages 20-24.

Your undergraduate studies will begin with one or two foundation courses. Most students must include two foundation courses in their degrees, though you need not take them both in the first year.

Foundation courses provide an introduction to the University's teaching methods and to university-level study, and each covers a range of disciplines which you may wish to pursue at higher levels in subsequent years. Even if you have previous qualifications you will normally need to take one foundation course, and most students take a second. Each will count as a full credit towards your degree.

Each of the faculties (except the School of Education) has a foundation course. They are described in detail in Section 2 of this Guide, pages 12-19. These are the **only** courses you can take in your first year as an undergraduate (other than two half-credit mathematics courses which form alternatives to the mathematics foundation course; these are also described in Section 2).

After the foundation courses, each faculty offers a range of courses at second, third and sometimes fourth level. Most second-level courses are designed for breadth, to give as

wide a choice of subject matter as possible. Third- and fourth-level courses are of honours standard; they are more specialized, and may depend on skills acquired in earlier courses.

Choice of courses

After your first year on a foundation course you can choose from about 130 different courses and can combine courses from any of the faculties. Restrictions on choice of course are kept to a minimum.

Non-specialist degrees

Students sometimes ask if they can take a specialist honours degree with the University, concentrating on a single subject. In fact, the University encourages breadth of study at all levels, and usually you will have to choose your higher-level courses from at least two subjects, although they could be closely related. If you would like further advice on your pattern of study contact your local Regional Enquiry Service (addresses on page 28 and 30). General advice on planning your degree is given on pages 11 and 20-22.

Fees

Information about fees and financial awards is given in Section 3, pages 26-27.



To provide practical experience, some courses include a home experiment kit. That for the science foundation course is a miniature laboratory.

THE SYSTEM OF STUDY

Studying at home requires a lot of will-power – and, if possible, the support of your family and friends. You will have to plan your studies to fit in with your home life and your working life.

Courses last for nine months, from February until October. During that time, for a full-credit course, you may be spending about 12 to 14 hours a week studying.

Each week you read some of the correspondence material and set books, follow broadcasts, carry out practical exercises and prepare 'assignments'.

Correspondence material

At intervals during your course you receive packages through the post containing specially written and designed paperback texts: these are called 'course units'. There are also notes on broadcasts, assignments and exercises, and in some cases audio-visual materials such as records, cassette tapes and slides.

Many science and technology courses also have a returnable kit of equipment and materials to enable you to carry out experiments in your own home.

Set books and background reading

On most courses you will also use set books; these are normally paperback editions. We recommend that you buy rather than borrow them, because you will need them throughout the course.

Before the course begins you will be sent a list of set books with the names of booksellers who stock them. Your course material may also list books recommended for background reading, but you are not expected to buy any or read all of these.

Access to a microcomputer

Some courses have a practical computing component. For one or two courses the equipment necessary for the course is supplied by the University. However, for a small but growing number of other courses which have a substantial computing requirement, you will need to have easy and regular access to a microcomputer which meets a given technical specification. You should note that the Technology Foundation Course (T102) is in this category.

If you do not have access to a suitable computer the University will enable you to buy one at a discount or hire one on an annual basis.

The computer specification is given below and additional information will be provided when you apply for these courses.

Specification

MSDOS (version 2.1 or later).

GEM (version 2 or later).

512K RAM.

Single disk drive (although two drives are more convenient).

Keyboard: 84-key IBM PC compatible or equivalent.

Monitor (monochrome or colour).

Printer port (parallel or serial).

Serial port (RS232 or equivalent).

Mouse with appropriate firmware or software device driver.

Printer: 80-column dot matrix or other, with graphics screen dump facility.

Essentially this defines a system based on an IBM PC or compatible microcomputer.

To ensure compatibility with course software the equipment must be able to run unmodified IBM PC versions of the following software:

UCSD PASCAL version IV.2.2 (Pecan)

Lotus 1-2-3 version 2 (Lotus)

PC Automator 2.2H (Direct Technology)

First Framework version 1.1 (Ashton-Tate)

(You will not be expected to acquire this software.)

The University's Academic Computing Service will be happy to provide additional information in response to written enquiries. Please address any such enquiry to: ACS, The Open University, Walton Hall, Milton Keynes MK7 6AA.

Radio, television, video and audio cassettes

The University and the BBC in partnership produce television and radio programmes which form an integral part of most courses. These are broadcast on BBC1 and BBC2 television and VHF radio at weekends and some late evenings and early mornings.

Foundation courses tend to have more television and radio than higher-level courses. Programmes are used in a variety of ways. Television often concentrates on particularly visual aspects such as scientific experiments, dramatizations, or case studies. Radio is used to present expert lectures and discussions.

Many courses include audio cassettes, and these are often used in conjunction with printed components (e.g. diagrams, maps) or with parts of a home experiment kit (e.g. rock samples).

There is a short-term loan service enabling students to borrow video recordings of television programmes for some courses.

Regional Centres

So far we have been describing the teaching materials designed and prepared at the University's headquarters in Milton Keynes. The University also has thirteen Regional Centres (in Scotland, Wales, Northern Ireland and ten regions of England), where full-time academic and administrative staff arrange the local teaching support for students and provide advice for applicants and enquirers.

The Regional Enquiry Service based in your nearest Regional Centre will probably be the first link you will have with the regional support services. As a student you will find that the Regional Centre becomes an essential link in your studies, appointing and monitoring tutors and counsellors, arranging tutorials, day schools, examinations, degree ceremonies and so forth.

Study centres

The University has a national network of about 250 study centres based in local institutions of education (see pages 28-30 for locations). By identifying the study centre you will find most convenient to use, you can also find out which is your Regional Centre.

Study centres are open on weekday evenings and sometimes on Saturdays. They provide a place for students (both undergraduate and associate) to meet for tutorials, seminars, and informal discussion with each other and with tutor-counsellors and course tutors. Most study centres have a computer terminal for the use of those students whose courses require it.

You are not obliged to attend events at your study centre, but most people prefer to do part of their learning together and so avoid the sense of isolation which correspondence students can sometimes feel. Many student self-help groups meet regularly at study centres. They are also the focal point for social and educational activities organized by local branches of the Open University Students Association – OUSA.

Tuition and counselling

The University employs about 5,000 course tutors, tutor-counsellors and associate student counsellors to provide local support for students. These staff are chosen not only for their academic ability but also for their special interest in teaching adults.

When you begin your studies you will be assigned to a tutor-counsellor who will be available fairly regularly at your study centre to discuss your work. He or she will help you with the course's academic content and with making the best use of the teaching system. Your tutor-counsellor usually continues to act as your general adviser throughout your undergraduate studies.

Correspondence tuition is the central teaching process in the Open University. The amount of face-to-face tuition is limited, and varies according to the level of the course, the number of people studying it, and their geographical spread.

You should note that the amount and quantity of tuition available to you if you are in a remote or isolated location is likely to be different from that available to a student in an urban area.

Generally speaking, there is more face-to-face tuition available for the foundation years of study than in later years. On higher-level courses you will be allocated to one or more specialist course tutors who will be responsible for your correspondence tuition. You may be able to meet them at study centres for face-to-face tutorials, but some of these courses have relatively few students and it is not always possible to give you a course tutor who lives close to you. On higher-level courses face-to-face tuition is usually based on large urban centres.

If you cannot meet your tutor he or she will always be ready to communicate with you by letter or telephone.

Assignments and examinations

During your course you will do a number of exercises known as 'assignments'. These will be marked either by your local tutor or by computer at the University's headquarters.

Tutor-marked assignments (TMAs)

You submit written work such as essays, answers to problems or reports, by post, to your tutor-counsellor or course tutor. They

mark your assignment and it is then sent back to you with comments. This exchange constitutes your principal contact with your tutor.

Computer-marked assignments (CMAs)

These are used in a number of courses. They comprise a series of multiple-choice and/or single-answer questions. You submit your completed assignment direct to the University's headquarters where it is marked by computer. You are sent your score for the work and, in some cases, comments generated by the computer.

Assessment

The scores awarded for some of your assignments are used at the end of the course to assess your performance. There is also a three-hour examination for each course held in October. Your overall success is measured by both your assignment scores and your examination scores, with, on most courses, approximately equal weighting given to each component.

Summer schools

All foundation courses and some others at higher levels include a one-week residential summer school. These are held at more than a dozen universities throughout the country in the period from early July to early September.

Summer schools give you an opportunity to immerse yourself in your course, free from distractions of work or domestic responsibilities. They offer valuable contact with other students, with tutors, and with counselling staff. Some schools include essential teaching of various kinds not possible at home or in study centres; or you may have the opportunity to use highly specialized equipment. Programmes include seminars and tutorials, field and laboratory work, projects, performances, and lectures. There are also informal discussions and social activities.

Each summer school is essential and an integral part of its course. When you register as a student you accept an obligation to attend the summer school and pay the appropriate fee.

The University recognizes, however, that there may be some students who cannot attend their summer school in a particular year, for good reasons, and who should therefore be excused the obligation to attend.

The main circumstances in which the University would normally grant excusal from attendance at a summer school are as follows:

- 1 Serious illness of student or dependant
- 2 Students unable to make arrangements for care of dependent relatives or children
- 3 Sudden family bereavement
- 4 Difficult or advanced pregnancy
- 5 Physical or psychological disability
- 6 Self-employed students unable to obtain a locum for the summer school period
- 7 Inability to obtain leave
- 8 Students temporarily abroad on business
- 9 Students with two summer school obligations in the same year who have limited holiday entitlement
- 10 Students in the Merchant Seamen and Cyprus schemes

Documentary evidence (such as a medical certificate) is normally required.

Excusal means that students who pass the course will not have their course credit withheld through not attending summer school, which would otherwise be the case.

We should stress that the vast majority of students who do attend summer school in their first year find the week's experience academically invaluable. Many say that their summer school helps them to see the course in perspective, and gives them more confidence as they approach their examinations.

Detailed information about summer schools is sent out at the beginning of your first year of study. You are given a choice of a number of different venues and weeks and we are able to allocate most students to their first choices.

Students with disabilities

We know from experience that Open University methods of study can be particularly suitable for students with physical or sensory disabilities, who may have difficulty in taking courses with other institutions.

Indeed, the Open University has more than three thousand students whose full participation in every aspect of their courses may be affected by a disability. It is our policy to do what we can to assist such students to minimize any handicaps to study - but obviously we can help only if applicants themselves identify such handicaps when applying.

The help we can offer includes: information and advice on choice of course; preparatory material for students with visual or hearing difficulties; advice from consultants on aids and equipment; course material on tape and transcripts of broadcasts for many courses; and special facilities at summer schools, e.g. if necessary you can be accompanied by your own personal helper. You may be considered for excusal from summer school on grounds of disability.

It may not be possible to predict how your disability will affect your studies, but if you are in any doubt it would be wise to mention it. No discrimination is exercised against any applicant declaring a disability. On the contrary, there is a scheme which in certain circumstances guarantees admission to people whose only possible access to higher education is an Open University course, and for whom waiting for normal entrance procedures would cause serious hardship.

For further information and guidance you should contact your Regional Enquiry Service.

If you have a disability you are also advised to get in touch with your Director of Social Services as soon as possible, to take advantage of facilities under the Chronically Sick and Disabled Persons Act 1970: this may include additional financial support to cover special needs.

(NB This Guide is available on audio cassette for visually handicapped applicants, from the Office for Students with Disabilities, PO Box 79, The Open University, Walton Hall, Milton Keynes MK7 6AR.)

PREPARING FOR YOUR DEGREE COURSE

Using the Regional Enquiry Service

Each of the University's 13 Regional Centres has its own Enquiry Service. (Addresses are given on pages 28-30.) Every Regional Enquiry Service will answer queries by letter, 'phone or in person. (If you want to visit a Regional Centre it is best to make an appointment.)

The main purposes of the service are to help you decide whether Open University study is appropriate for you, to help you judge the implications of part-time degree-level study, and to tell you what the alternatives are.

If you feel you need advice, please contact the Regional Enquiry Service as soon as possible. Remember, we can give you specific help only if you let us know your questions. You won't lose anything by asking!

If you do decide to apply for an undergraduate place, the Regional Enquiry Service will -

- supplement the advice in this booklet about preparing to study a particular foundation course;
- arrange other preparatory activities for some applicants, which may include your being contacted by a member of the University's staff. (Incidentally, any such contact is simply part of the advisory service and in no sense constitutes a selection process. All decisions about your application remain with you.)

Preparatory work

Once you have applied for a foundation course you should think about how to prepare yourself for study. How much preparation you do is up to you, and will depend to some extent on how long it is since you last studied, and on your familiarity with the material.

What the Open University provides

One of the most effective ways to develop the study skills required for your foundation course is to do some preparatory work in your chosen subject area. Refer to the foundation course descriptions in Section 2 of this *Guide*, which contain suggestions for appropriate preparatory work. Contact your Regional Enquiry Service if you feel you need more guidance after reading these descriptions.

If you accept an offer of a place for 1990 you will be sent, in Autumn 1989, a package of preparatory materials for your foundation course. These will introduce many aspects of study with the Open University and will provide a variety of activities related to your foundation course.

At about the same time you will be linked with your tutor-counsellor, who will be able to



Finding a small part of your home where you can do your Open University work is an important part of preparing for your studies.

advise you, among other things, on the use of the preparatory package.

We believe that the essential aspects of preparation are: (a) getting clear in your own mind why you are studying; (b) knowing what you want and expect from the experience; (c) deciding how you are going to set about it; and (d) being aware of what changes you may need to make in your life to accommodate it.

What others provide

For most students the preparatory package described above will be sufficient preparation. However, you might like to consider what is available outside the Open University.

Preparatory courses may be offered by local colleges, university extra-mural departments or departments of continuing education, and the Workers Educational Association (WEA). Some of these courses may take the form of introductions to specific Open University courses; others cover more general topics such as 'returning to learning' and 'basic study skills'. Many run in the Autumn term from September to December.

There is an increasing number of local courses referred to as 'flexistudy' or 'open learning' courses, which are not tied to traditional terms and may be started at any time - and for this reason may be particularly useful to people intending to become Open University students.

Some institutions also offer summer courses, sometimes residential, designed to meet the needs of those preparing for study with the Open University.

For details of courses in your area, contact your Regional Enquiry Service.

Preparatory courses are also available from correspondence colleges. These can require a significant commitment of time and money, and if you have any doubts we suggest

you ask your Regional Enquiry Service for advice before enrolling. However, the following information may be useful.

The National Extension College

(NEC) is a non-profit-making correspondence college which provides a range of courses of interest to those intending to become Open University students. These are at two levels: Fresh Start courses and preparatory courses. You can enrol for them at any time, but you should note that you will need six to eight months to complete one of the NEC preparatory courses. For further information contact -

National Extension College
18 Brooklands Avenue
Cambridge CB2 2HN
Telephone 0223-316644

There are other correspondence colleges which are members of the **Council for the Accreditation of Correspondence Colleges**, some of whose courses have been found helpful by our applicants. For detailed information contact -

Council for the Accreditation of
Correspondence Colleges
27 Marylebone Road
London NW1 5JS
Telephone 01-935 5391

Television and radio broadcasts

You may find it useful to see and hear in advance some of the television and radio programmes of the foundation course you intend to study. You can get details of their transmission times in 1989 by asking for a copy of the *Broadcast Calendar* for the course of your choice from the Central Enquiry Service whose address is given on page 28. (Many of the programmes broadcast in 1989 will be the same as those you will be following in 1990.)

Calendars are available from January 1989.

A television programme specially for applicants to the University will be broadcast at intervals throughout 1989. From November onwards there will be television and radio programmes for those about to start studying the following February. Throughout the year there are other Open University broadcasts of general interest to students and applicants. Details of all these programmes are available from Regional Centres or the Central Enquiry Service at Walton Hall.

Broadcast times of all Open University programmes are also printed in *Radio Times* and some national and local newspapers.

COURSE CREDIT STRUCTURE

This section introduces some of the 'small print' you will need to know about when completing your application for a place as an undergraduate.

Rules about course choice

You must take at least one foundation course in your first year. In fact, foundation courses are the **only** ones you can take in the first year, other than the two half-credit mathematics courses described in Section 2. The only exceptions to this are when people transfer from full-time higher education under one of the approved schemes - see below under 'Directly transferred credits'.

Your BA or BA (Honours) degree must include two foundation courses, unless you are awarded credit by advanced standing. You need not take both in your first year. You must complete both successfully within your first six credits. Each foundation course counts as a full credit towards your degree.

When you have gained a foundation course credit you can go on to take courses at higher level. The minimum each year is one half-credit course and the maximum two full-credits' worth, which may consist of any combination of half- and full-credit courses.

In general you are free to choose from the full range of undergraduate courses, and in all subject areas. There are, however, a few commonsense restrictions. For example, certain courses have a substantial overlap of content and you may not count two such courses towards your degree. These are known as 'excluded combinations'. Some higher-level courses carry a 'recommended prerequisite', that is, a recommendation that you should already have obtained a credit in another specified course (or courses) to give you the background knowledge needed.

To qualify for the BA (Honours) degree at least two of your eight course credits must be at third or fourth level.



Students collaborate on an experiment at a summer school.

Advanced standing

'Advanced standing' is the policy under which the Open University is able to give you some academic credit towards your degree for study already completed elsewhere. There are two advanced standing schemes: general credit exemptions and directly transferred credits.

General credit exemptions

If you have successfully completed at another institution at least six months of full-time study (or its equivalent in part-time study) at a higher educational level, you may be eligible for the award of credit exemptions. These do not exempt you from specific courses but reduce the number of credits you need to obtain for your degree. We generally define 'higher educational level' to mean an academic standard beyond that of GCE A level, Scottish Higher, ONC or other equivalent qualifications.

General credit exemptions may be awarded at the rate of one for each year of full-time study (or its part-time equivalent). The minimum award is 0.5 exemption and the maximum three exemptions.

If you are awarded one exemption you will have the choice of taking either one or two foundation courses. If you receive more than

one exemption you can count only one foundation course credit towards your degree.

Each claim is assessed individually, so we cannot provide you with definite information on your eligibility until you have submitted a formal claim.

You may claim general credit exemptions at any time before the award of your BA degree, though it may help in planning your studies to have your claim settled early on.

Directly transferred credits

This scheme is based on a series of agreements on credit transfer which the Open University has negotiated with the Council for National Academic Awards (CNAA) and the following 18 universities: Bradford, Essex, Heriot Watt, Hull, Kent, Lancaster, Liverpool, Queens (Belfast), St Andrews, Salford, Southampton, Stirling, Strathclyde, Sussex, Ulster, Wales, York and Trinity College (Dublin). These enable students who have successfully completed one or two years of a degree or Diploma of Higher Education course to obtain full credit for this study when joining the Open University undergraduate programme.

Under these agreements two credits may be awarded for each year of full-time study successfully completed, up to a maximum of four credits. Awards are accompanied by restrictions on the amount of foundation-level study which may be counted towards the degree and by exclusion from courses which overlap significantly with the previous study.

Claims in this scheme take considerable time to assess, so they must be submitted by mid-August in the year before study with the Open University starts.

How to get further information

There is a space on the application form for you to request an advanced standing claim form. If you ask for this it will be sent to you with an explanatory booklet, and if you then submit a claim you will be asked to pay a fee to cover processing costs.

Credit transfer

Credit transfer is a two-way process, so Open University credits may be accepted by other universities, polytechnics and colleges as giving advanced standing to students who transfer to full-time higher education. There is a growing number of people who do make such transfers.

Remember, if there is anything on which you need more help or information, contact your Regional Enquiry Service, as listed in Section 3.

COURSES FOR THE BA DEGREE

Planning your degree

This section is intended to help you choose the course you will take in your first year with the Open University, and to relate it to others which you may be interested in taking later on.

At present you will be mainly interested in the five foundation courses and two introductory mathematics half-credits which are described in detail later in this section, because these are the only courses which you are permitted to study in your first year. However, foundation courses are designed to lead on to higher-level courses, so you should have in mind at least the general direction which you hope your studies will take.

Course choice in the Open University is deliberately left as flexible as possible. You are not asked to commit yourself to taking 'a biology degree' or 'a history degree' or any other predetermined combination. Instead, in each year you simply choose the course(s) you want to study in the following year, from the full range available. There are very few restrictions.

Some people are happy to pursue their studies simply by selecting those courses that most interest them. There is nothing wrong with this approach if personal development is your main reason for study. At the other extreme, there are students who, from the start, map out the sequence of courses which will make up their degree, without considering any alternatives. Perhaps the majority take the middle line: that is, they have a general idea of the area which interests them, but are prepared to let their specific interests develop with their studies. We know of many students who have made a change of direction or emphasis because their foundation courses introduced them to a subject or discipline which they had not previously considered.

In choosing the general direction of your studies we would urge you to start with as open a mind as possible. Avoid stereotyped notions about what subjects are 'suitable' and 'unsuitable'. To give a specific example, there is the traditional view that women are not well-suited to science and technology subjects – whereas in fact our statistics show that women achieve just as good results as men, and often better, on most of our science and technology courses. In this connection it is worth bearing in mind that there is a national shortage of highly qualified people in these areas.

At the same time it is worth pointing out that the skills taught in the arts and social sciences are among those valued by employers in commerce, industry, and the public sector. Hence, in choosing your courses, you may like to consider whether anyone nowadays can rest on narrow specialization in one particular academic area.

A 'coherent' degree

Our phrase for a degree made up of carefully selected and related courses is 'a coherent degree profile'. In some circumstances the coherence or otherwise of your degree may be important. An employer may wish to know that you have studied certain subjects; professional recognition may depend on the content of your degree. If you think these considerations may apply to you, seek advice as early as possible from the employer or professional body concerned, or from the

University's Regional Enquiry Service.

The University has a series of leaflets covering recognition of qualifications, course choice and career planning, and occupational information; these are available from Regional Centres.

Mixing your courses

The Open University, like most universities, is organized in a number of faculties. However, this does not mean that because you start your studies with, say, the Arts Faculty's foundation course, you must thereafter take nothing but Arts courses. On the contrary, most students not only take more than one foundation course but subsequently study courses taken from two or more faculties.

All faculties offer a range of second-level courses. You will find that some of these concentrate on a particular discipline – for example, chemistry or psychology – while others range across a number of disciplines. Some courses are based on a topic, rather than a discipline – *Third World studies* is one such example – and because of this cannot be allocated to any particular faculty. Such courses are sponsored by the University as a whole and are known as 'U-courses'.

It is possible for Open University undergraduates either to put together a very broadly-based general degree, or to choose within their degree profile a number of courses with a related theme to obtain a limited amount of specialization. (In America this would be called 'majoring in' history, or economics, or physics, or whatever.)

If you decide to go on to honours you will need to take third/fourth-level courses. In general these are more specialized, as well as being more difficult, and are often single-disciplinary in their approach. Some assume knowledge of subjects and techniques taught in second-level courses, so you will need either to take those courses first, or to be sure that you have acquired the relevant knowledge elsewhere. One example of this might be the ability to use statistics, which you need for many higher-level courses in mathematics, technology, social sciences, education and science – and even the humanities.

The range of courses available

On pages 20-22 we give a general introduction to undergraduate courses with an overview from each faculty.

Courses currently available to undergraduates who have successfully completed a foundation course are listed under subject headings on pages 23-24. Continuing students receive more details about all the courses in the spring of each year.

COURSES YOU CAN TAKE IN YOUR FIRST YEAR

This section gives detailed descriptions of the foundation courses in Arts, Social Sciences, Mathematics, Science and Technology. On your application form you must indicate which of these you are prepared to study in your first year as an undergraduate.

In addition, as an alternative to the Mathematics foundation course, there are two half-credit courses which prepare students for the more mathematical subjects in either technology or science. These may be taken in the first year, alongside another foundation course, or separately in a later year.

Even if you already feel sure of your choice we suggest you read all of the following descriptions before completing your application form.

A102 An arts foundation course

Aims of the course

- 1 To stimulate your interest in and enthusiasm for the study of the arts, and to provide a basis for more detailed study at post-foundation level.
- 2 To help you develop the basic skills of clear and logical thinking, selecting relevant material, interpreting it, and expressing yourself in good English prose; and to introduce you to what is meant by education and the learning process at university level.
- 3 To introduce the separate purposes and methods of the different individual disciplines in the arts; but nevertheless to stress the general idea that the arts disciplines should not be kept in separate compartments.

Outline of the course

The first half of the course introduces each of the five main disciplines taught in the faculty. The remainder builds on these introductions with an interdisciplinary study of Victorian Culture and Society, 1850-90.

History (Units 1-3) These units examine the nature and importance of history, its relationship to other arts, and the special concerns of the historian: the basic problems and techniques of writing history and the evaluation of historical events.

Literature (Units 4-6) The introduction to literature discusses some of the principal issues involved in the study of literature and is illustrated by a variety of literary texts. Formal aspects of poems and novels are discussed together with the general question of interpretation.

Music (Units 7-9) The introduction to music deals with the way we listen to music, concentrating on aural and analytical skills and relating the larger musical forms of symphony and oratorio to their historical contexts.

Art History (Units 10-12) The introduction to art history studies the 'idea of art' as much as the circumstances of production and reception of material objects classified as art in the Western tradition. Different genres of art are explored, as are the issues of how meaning is transmitted through visual imagery. This section is illustrated with a wide range of examples from all periods of Western art.

Philosophy (Units 13-15) The introduction to philosophy is concerned with the moral theory known as 'Utilitarianism' and with the question whether a scientific approach to human beings involves denying that they have free will.

Interdisciplinary section: Victorian

Culture and Society 1850-90 (Units 16-32)

An integrated study which considers the changes in Victorian culture and society over a period of forty years. It is divided into a series of blocks which examine Victorian religion, science and moral philosophy; Victorian culture, ranging from Royal Academy exhibitions to music halls, pubs and trade union banners; the State and the individual; and changes in town and country. This section includes study of pre-Raphaelite paintings, Charles Dickens' novel *Hard Times*, the poetry of Tennyson and Gerard Manley Hopkins, the music of Gilbert and Sullivan, and the writings of J.S. Mill and Matthew Arnold.

Broadcasts and cassettes

The 32 television and 16 radio programmes are an integral part of the course. You will receive four C90 and one C60 audio cassettes for use with the units.

Summer school

Some of the time at summer school will be spent in consolidating the literature, history, philosophy, music and art history material. Most of the week will be devoted to particular aspects of the interdisciplinary study of Victorian culture and society.

Assessment

The tutor-marked assignments take the form of short essays of between 1000 and 2000 words. You will be given a continuous assessment score for your assignments which will be combined with the score you achieve in the final three-hour examination to decide your overall result.

Preparatory study

Students are not expected to have any special knowledge but you should have read two of the set books – Best, *Mid-Victorian Britain* and Dickens, *Hard Times* (see below) – before you begin the course material.

You will also be sent a preparatory package in the autumn preceding the year in which your studies begin. This will contain material from the different disciplines in the Arts Faculty with exercises and guidance about ways of studying it.

Set books

Best, G. *Mid-Victorian Britain*, Fontana
Dickens, C. *Hard Times*, Penguin
Gombrich, E.H. *Art and Illusion*, Phaidon
Course Reader: *Culture and Society in Britain 1850-90: a source book of contemporary writings*, Oxford University Press.

D102 Social sciences: a foundation course

We live in a society which is constantly changing, and it is often believed to be changing for the worse. These changes affect all of us in many ways. Economic crises affect our chances of employment or our standards of living. The decline of particular industries can alter the social character of whole areas. There are doubts about the ability of Parliament to provide a political focus and leadership for the whole country. In all areas of social life, from these large economic and political issues to the mooted breakdown of family life and morality, major changes have taken place.

Although such changes are dramatic and far reaching, they nevertheless take place within a society which has remained recognizably British. Many of our institutions and patterns of life have stayed stable and familiar. We continue to work in the same sort of factories and offices, and to spend our earnings on the same sort of goods. We still cast our votes in the same democratic political system.

One of the aims of D102 is to introduce the study and explanation of both these aspects of society – how it changes and how it absorbs change within an overall stability.

The course approaches these issues from a number of standpoints. It looks at British society as a social system made up of interlocking institutions (such as the economy, government, education, the mass media and so on), and it examines the roles of individual citizens within the system.

D102 also questions the extent to which we, as individuals, are constrained by our social system and how much control we have over it. The course also deals with the question of what sort of groups Britain is divided into. Are class differences important here? Why do we identify some forms of labour as 'women's work'? Do we treat some groups as 'second class citizens'?

All these questions are subject to much heated disagreement within our society. D102 introduces some of the ways in which social scientists try to study and explain such issues. You will meet some of the theories offered by the individual social science disciplines (economics, geography, political science, psychology and sociology) and examine how they contribute to the task of making sense of society. But many questions – such as how British society can manage to be both stable and changing – are too wide-ranging for single disciplines to tackle on their own. To begin to understand such issues, the disciplines must work together, pooling their various insights



Breaking the social rules - one of the subjects studied in the Social Sciences foundation course.

and types of explanations, and most of D102 is therefore interdisciplinary.

D102 brings together much of the factual information about these issues and questions, although no final or definitive answers are provided. But while we do not offer final answers, the course does provide an introduction to the systematic analysis of social life and ways of trying to sort out the merits of different explanations. By the end of D102 you may not know all the answers, but you should know more about the kinds of question that need to be asked.

Correspondence texts

The course has 32 units organized into eight blocks: *Studying Society*; *The Economy – a Social Process*; *The Production of Social Divisions*; *Politics, Legitimacy and the State*; *Conformity, Consensus and Conflict*; *Social Change, Geography and Policy*; *The Individual and Society*; *Models of Man and Social Science*.

Broadcasts and cassettes

Much of this course is presented in the form of words on a printed page. But printed pages freeze things. That is a problem because societies and the individuals in them are not static; they are alive and dynamic. Television is therefore especially important in a course like this because it conveys particularly well that dynamism and excitement to which the social sciences must and do relate. The 32 television programmes in D102 are therefore an integral part of the course, with the notes and exercises on them built into the course units.

Nine of the 16 radio programmes make up a series of short, introductory lectures which

relate to each block of the course. All the lectures have been specially prepared for this course by distinguished social scientists. Another eight radio programmes have a magazine format. They will (among other things) provide you with up-to-the-minute reports on how you and other D102 students throughout the country did on the previous TMA, and advise you on the particular TMA question you are working on.

Three cassette tapes, together with accompanying visual material, reinforce and amplify some of the written texts. The cassettes help you with certain skills taught in D102, like drawing graphs and working out percentages. The advantage of the cassette is that you can stop it when you like, or play it again and again if you want more practice.

Tuition

There are tutorials at regular intervals at your local study centre, with occasional day schools in some regions.

Summer school

The D102 summer school is divided into three two-day sessions involving group discussions and activities related directly to the course themes, and optional free-time lectures. There are also remedial sessions to help you if you have fallen behind or are having any particular difficulties with the course.

Assessment

Your continuous assessment is based on seven tutor-marked assignments (TMAs), progressing from short to longer essays. There is also one TMA early in the course which does

not count towards your overall assessment, to enable you to practise your writing skills without prejudice to your score. Your final course result is based equally on your continuous assessment and a three-hour examination taken at the end of the year.

Newspaper

A D102 newspaper will be issued from time to time and will include such things as letters from students, reports from tutorial groups, cartoons, brief reports on new books and articles and comments on current affairs.

Preparatory study

D102 was designed to be accessible to students with no previous knowledge of the social sciences. However, if it is a long time since you did any study, you can certainly get yourself off to a good start by doing some kind of preparation before the course begins.

After you have accepted a place on D102 you will receive, in the autumn, a preparatory package. This consists of reading and note-taking activities similar to those you will undertake in D102, so that you can practise some of the skills developed in the course, and consider how you will organize your studies.

To use the preparatory package you will need to have access to the course reader (see below under Set Books) and an audio cassette player – both of which you will need when you study the course itself. In November the first four units of D102 will arrive and you will then be able to start working gently through the materials.

If you want to start your preparation even earlier, the following suggestions may be useful.

Books and journals

Pick a serious newspaper like *The Observer* or *The Sunday Times*, or journals like *New Society*, the *Economist*, or *New Statesman*, and read about the social issues they discuss and report. But try to go a little further than just reading: look out for different accounts of the same event; note what evidence is included for the conclusions drawn and the sources of such evidence. It is a good idea to begin making brief notes on your reading. The preparatory package will further develop your note-taking skills and gives advice on preparatory reading, including a book list.

TV and radio

Broadcast programmes provide an important resource for developing your background knowledge. Documentaries and current affairs programmes like *Weekend World*, *Horizon*, *World in Action* and *Panorama* frequently raise the kinds of issues discussed in D102. Try to view and listen critically.

Set books

There are two set books for D102: the course reader, Potter, D. (ed), *Society and the Social Sciences: An Introduction*, Routledge and Kegan Paul; and Halsey, A.H., *Change in British Society*, third edition (1986), Oxford University Press OPUS Books.

S102

A science foundation course

Outline of course aims

S102 is designed both for students who do not expect to study science beyond foundation level, and for those who intend to go on to higher-level science courses. It will be within your reach even if you have no formal education in science and no mathematical knowledge beyond simple arithmetic. However, the course is not trivial or superficial, and it will present you with a stimulating intellectual challenge even if you already have qualifications in science.

S102 introduces, explains, and uses many of the basic concepts and principles of physics, Earth sciences, chemistry and biology. Our intention is that when you have taken the course you should be knowledgeable about a wide range of modern scientific theories and that you should be familiar with some of the techniques of experimental work in science.

Outline of contents

Consider these questions:

- How can we find out what the sun is made of?
- Why are there major earthquakes and volcanoes in Italy but not in Britain?
- What is life? Is there a unique property of living things which distinguishes them from non-living?
- How can the distance to the moon be measured without having to go there?

In S102 these questions (and many others) are answered scientifically. The course covers four scientific disciplines – physics, Earth sciences, chemistry and biology – and we show how they are interrelated and point out what is common and what is specific to each discipline.

The course begins by considering very familiar observations such as the alternation of day and night, the changing phases of the moon, and the cycle of the four seasons. It explains how these observations can be understood in terms of simple **scientific models** of the solar system (i.e. the sun, its surrounding planets and other nearby matter).

Next, still in the context of the solar system example, we consider in detail the concept of measurement (you will actually measure the distance between the Earth and the moon) before introducing simple scientific laws that enable us to understand motion, force and gravity.

This discussion leads us to consider the Earth itself, in particular its internal structure and composition, which can be investigated in detail through measurements of the effects of earthquakes. We then consider the Earth's magnetic field and show how it has changed over time.

In the next two units a **scientific theory** is used to explain many diverse features seen on and within the Earth. For example, why earthquakes and volcanoes are found only in



This famous experiment demonstrating the rotation of the earth was re-created in St Paul's Cathedral for an Open University television programme.

certain zones; why rocks in the Sahara Desert show evidence that they were once covered by glaciers, and why the remains of marine animals have been observed in rocks at the top of Mount Everest.

The course then changes direction to consider energy and light, two important subjects that are featured many times in the rest of the course. This leads to a detailed investigation of the structure of atoms, the tiny 'building blocks' of matter. In the millions of chemical changes that occur around us (and within us) atoms change partners and the different groupings give rise to substances as different as salt, sand, water and petrol.

Certain very complex groupings of molecules have properties that enable them to be regarded as **living organisms**. We discuss which aspects of living matter distinguish it from **inanimate** (non-living) objects. We learn how organisms become adapted to their environment by a process of **evolution**, how they grow and reproduce.

The fundamental building block of organisms is the cell. Its structure and function is described in some detail, and illustrated using both plants and animals – but in the discussion of physiology (how organisms work) we use examples of human biology. This human theme runs through a discussion of genetic mechanisms.

In the next unit you see how each individual shares the environment with others, and we come to understand how finely balanced that environment is and how easily it can be destroyed. Next, turning our attention to the inanimate matter on the Earth's surface we show how the ages of rocks are estimated, and from this how the ages of the Earth itself and the solar system can be determined.

The final part of the course concerns the structure and behaviour of atoms and their constituents. This is a subtle and fascinating branch of science in which many of the results of experiment contradict common sense. One of the theories needed to understand these extraordinary results is **quantum mechanics**, which is introduced in non-mathematical terms and then applied to atoms to derive insights into atomic structure.

Finally quantum ideas are used again when we look at the recent discoveries of high-energy physics (that is, sub-atomic and sub-nuclear physics) that have made this branch of science one of the most exciting fields of human endeavour.

As you can see, S102 covers a wide range of topics. It shows how modern scientific techniques answer many questions – but raise many others. The detailed content and the insights it gives will enable you to appreciate the exciting and enormous scope of scientific enquiry. Whatever your previous knowledge of science S102 will increase and enrich your understanding of the world about you.

Broadcasts and audiovision

We make extensive use of broadcast television and audio cassettes. Each unit has an associated television programme that is an essential component of that unit; and there are three other programmes – one to introduce the course, another previewing summer school, and another in which we discuss a case-study at the end of the course.

The audio cassettes, normally used in conjunction with illustrations in the units, enable us to 'talk you through' key topics.

Summer school

S102's residential summer school gives you the opportunity to work intensively on carefully structured experiments in well-equipped laboratories, under the supervision of tutors. In addition there will be tutorials and films, and you will be able to meet other students and staff in informal surroundings.

Home experiment kit

A number of units have associated experiments in which you investigate concepts discussed in the text. The experimental work is an essential part of the course and is carried out at home with apparatus provided in the kit.

Index and glossary

Each unit has an index; there is also a Course Index covering every unit. In addition you will be provided with the Glossary in which each important term introduced in the course is defined.

Assessment

The continuous assessment will be carried out with eight tutor-marked assignments (TMAs) and ten computer-marked assignments (CMAs). Half your overall course result will be determined from TMA and CMA scores and the other half depends on a three-hour computer-marked examination at the end of the course.

Set books

There are no set books for the course.

Calculator

You will be expected to have a pocket calculator that is capable of processing simple mathematical functions: multiplication, division, logarithms, sines, cosines and tangents.

Preparatory advice

As a student of S102 you will have to read and follow scientific arguments, solve problems – numerical and otherwise – construct and express in writing your own logical arguments, make careful experimental observations and explain them. You may feel that you will work through the course more easily if you have a chance to practise these activities before S102 begins. The preparatory package gives you the opportunity to do this.

You will be sent the preparatory package after you have initially registered, about three months before the course begins. It consists of several components: a booklet *Preparing for the Science Foundation Course* with accompanying audio cassette, a *diagnostic quiz* to help you assess your background in mathematics, and a two-booklet set *Mathematics for the Foundation Course in Science*, or *MAFS* for short.

Preparing for the Science Foundation Course concentrates on basic study skills – effective reading, taking notes, making observations, writing reports. The *MAFS* booklet and four accompanying television programmes contain all the mathematics you will need in S102. If you return the diagnostic quiz you will receive advice about the parts of *MAFS* on which you should concentrate

T102 Living with technology: a foundation course

Aims of the course

Whether we like it or not, technology has become a major force in all our lives. If you would like to know more about the problems we face and the possible solutions open to us, and if you are interested in learning some of the skills which will help you to make up your mind about present and future technological changes, then T102 is the course for you.

The title *Living with technology* has been chosen deliberately to reflect the double-edged nature of technology which is explored in the course. It is double-edged in the sense that although our way of life relies on the products of technology – from cars and television to tinned food and nylon sweaters – we are also conscious of the problems posed by



Expert tutors are available to help with technical experiments at summer schools.

technology, such as energy shortages, pollution of the environment, and the declining number of jobs as automation increases.

The course deals with some of the technological activities which provide our basic needs of shelter, work, energy, material resources, food and health, and these needs are approached by considering contemporary issues relating to them.

At the end of the course you will not only be more aware of what is involved in meeting these basic needs, but you will also have acquired some of the skills of a technologist in tackling complex problems: you will have become more technologically self-reliant.

To achieve this the course teaches you some characteristics of the technologist's approach to problem solving – particularly the use of systems thinking, design and modelling – together with (at an introductory level) some basic engineering and science, such as mechanics, materials, electricity, and chemistry and some economics.

No previous knowledge is assumed, but you are expected to be able to add, subtract, multiply and divide ordinary numbers. Any other mathematics needed, such as decimals, some simple algebra and plotting graphs, is covered in a tributary text (see below) which is linked to most sections of the course. Those of you to whom these topics are completely new will need to spend additional time on this tributary.

Another important part of the course is concerned with helping you to develop basic skills in learning from teaching texts and television, and in communicating your own understanding and views in writing.

In addition to these basic skills, T102 will help you develop what is for many people a new and important skill – the ability to use a standard desktop microcomputer. The course assumes at the outset that you know nothing about computers and will teach you how to use a powerful applications package which includes outlining, word-processing, spreadsheet modelling, graphics and simple database work.

The course will also provide specially written computer-assisted-learning (CAL) material to help you with numeracy.

The computing element of T102 will not involve programming of any kind: it merely requires you to learn how to use a computer as an everyday working tool.

Outline contents

The course is presented in seven sections or blocks, each of which will take four or five weeks of study. Each section is centred around an issue of current concern. The subject of each section is developed in the 'mainstream' text, which is designed to give you an overall perspective of how the issues and the topics covered in the section fit together. The engineering, science and other knowledge and skills you will need in order to understand and appreciate various aspects of these issues and to present reasoned arguments and criticisms about it are covered in 'tributary' texts.

The first block of the course, on *Home*, gives you a range of practical activities concerned with assessing the function and effectiveness of your own home. The section culminates in your planning a small house to meet a certain specification.

Then the second block, *Work*, looks at the way new technologies – especially those based on microelectronics – change jobs and the nature of work. It does this by considering how different kinds of work in the retailing and distribution sector are being affected by microelectronics. This block also includes an introduction to Information Technology (IT).

In the context of the current debate on world energy supply and the various conventional ways of producing electricity, the third block, on *Energy*, is centred around the question 'Are district heat systems a good idea?' Then in the next section on *Resources*, the issue is 'Are resources running out and if so what can be done about it?' Two particular examples are considered in depth: North Sea oil and copper.

The fifth block deals with *Food* and is based on the question 'Can current agricultural practices be sustained for at least 30 years and, if so, for 100 years?' The sixth block, *Health*, is about medicine as a technological activity and asks 'What should be done about cancer?'

The final block of the course does not demand any new learning but encourages you to put together the skills and knowledge you have now gained to present an essay on a specific topic.

Computing

The course requires students to use a microcomputer meeting the specification given on page 7. There will be a limited number of machines available for hire. It is anticipated that the University will continue to negotiate a discounted price with certain suppliers for students who wish to buy a computer. Some students may already have access to a suitable computer, and there may also be possibilities for sharing facilities through local arrangements. Your Regional Enquiry Service should be able to offer more detailed information and advice.

Broadcasts and cassettes

The television programmes associated with the course are essential to your studies. They are linked to the topics of the blocks of the course, and hence to your assignments. We would advise you not to attempt the course unless you have access to television.

A number of audio cassettes are included in the course material and access to a cassette player is essential for the work with the home computer.

Summer school

The summer school will provide you with a mixture of project work (some of which will be laboratory-based), tutorials and problem classes on all aspects of the course, lectures and discussions.

Assessment

There is a tutor-marked assignment (TMA) associated with each of the first six blocks, and computer-marked assignments (CMAs) linked to tributaries, not all of which are assessed. You are also required to tackle an essay of up to 3,000 words associated with the final block of the course, and to sit a formal three-hour examination. The essay is a component of the examination but is written in the four weeks before it.

Preparatory advice

T102 is designed to be accessible to students with no previous knowledge of technology. However, if you are returning to study after a long time you may still feel unsure about how prepared you are, whether you will be able to cope with the course, and whether you should be doing some work beforehand.

The University can help you with these problems in two ways. First, the Regional Enquiry Service should be able to offer detailed advice and information on locally organized courses which could be helpful. Second, a few months before you start the course you will receive a preparatory package. This contains material which advises you on how to prepare for study and gives you some optional tasks to practise on.

The package has a number of purposes. It will enable you to get used to studying with the Open University – making time available and using that time effectively. It will also help you to identify skills which might be rusty, such as mathematics or writing. Finally, you will be given the opportunity and incentive to read

about technology issues, particularly those which affect our lives. This should prepare you for the approach adopted in the course itself, which, as you will gather from this description, is based on issues of current concern.

M101 Mathematics: a foundation course

Aims of the course

What is mathematics, and what can it do? In this course we set out to answer this question by helping you to understand mathematics and how to use it.

No matter how little previous knowledge we expect you to have, a mathematics course always presents a real challenge. We have tried to organize our foundation course to help you meet this challenge. The intention is to get you doing mathematics in order to help you understand the underlying ideas.

The course is intended both to introduce and illustrate some of the methods and language of mathematics to students who do not intend to study any further mathematics, and to prepare students for the study of higher-level courses with a significant mathematical content.

In pursuit of the first aim, the course is designed to be self-contained and of general interest. We hope it will enable you to make the transition from the commonsense view to the more abstract and theoretical one needed to interpret, analyse and control the world around us.

As part of our approach to the second aim we stress not only the content of the maths (the need for good notation, and for definitions and theorems, methods of proof, techniques and applications), but also the way in which mathematical training will help you to think effectively when challenged by new problems and situations.

One of the most important objectives of the course is to help you to discover something about how maths is learned, and to acquire the confidence needed to proceed with further studies involving mathematics. If you learn to study independently and effectively, you will develop self-confidence as well as a foundation on which to extend your knowledge in useful and relevant directions.

Outline contents

The course is organized in six sections, each of which includes five weeks' study materials. Besides the six sections there is a separate unit designed to synthesize and build upon some of your experience in the rest of the course, together with a series of computing booklets which show you how to use a computer to solve simple problems.

The first section covers a number of basic ideas and techniques necessary for the study of later sections.

The material in the second section is intended to help you improve your command of

mathematical reasoning and acquire a firm basis of techniques for your study of more advanced topics.

The third and fourth sections are the core of the course. Section 3 is an introduction to the calculus and Section 4 uses matrix algebra (a technique for operating with collections of numbers) to explore a number of mathematical situations such as probability.

The last two sections lead the way to further studies. Section 5 on mathematical models discusses how to apply maths to real-life situations and is an introduction to courses where the emphasis is on applying maths. Section 6 looks towards courses concerned with the development of mathematics itself, and the topics covered have been chosen to introduce some of the ideas which will be studied at greater depth in subsequent courses.

The remaining unit encourages you to reflect on the way you think about and learn mathematics.

After taking the course you will have an overall view of some of the characteristic ideas of mathematics, and appreciate how they are used in other subjects. You will have mastered a number of skills and will be able to apply them to the study of new concepts and problems.

Broadcasts and cassettes

There are 32 television programmes, which form an essential part of the teaching material for the course. You are advised not to attempt the course unless you have access to television.

The 16 radio programmes help you to keep in touch with the development of the course. The programmes give tutorials on a variety of topics, and general advice.

You will also receive audio cassettes which, together with the accompanying visual material, form an integral part of many units in the same way as the televised programmes.

Summer school

The summer school will enable you to meet other students, to revise and review the work you have done on the course so far, to attend lectures on mathematical topics, and to work in small groups with tutors and other students on solving problems and practical projects.

Assessment

Your continuous assessment score will be based on eleven tutor-marked assignments (TMAs) and six computer-marked assignments (CMAs). Your final result is based equally on this continuous assessment score and on a three-hour examination at the end of the course.

Preparatory advice

Before beginning the course you will need some basic mathematical skills, corresponding very roughly to those covered in the first four years of secondary school mathematics. Two books have been written by members of the Mathematics Faculty specifically to help students prepare for M101. They are: Graham, L. and Sargent, D. (1981) *Countdown to Mathematics* Volumes 1 and 2, Addison-

Wesley. When you accept a place on M101 you will receive a preparatory package including a diagnostic quiz, Volume 2 of *Countdown to Mathematics* and a booklet which, among other things, will guide your work on these first two items.

The purpose of the quiz is to help you to find for yourself those areas of mathematics where you may need to do some preparatory work. If you think you may need to prepare rather more basic mathematical topics you should read *Countdown to Mathematics* Volume 1 (which you will have to buy). The Regional Enquiry Service will provide help and advice if you are unsure about this.

We hope that the preparatory package will give you the opportunity to become used to studying mathematics in your home as well as revising the mathematics you need for M101. There will be plenty of time for the necessary reading after you have accepted a place. If, however, you would like to undertake some mathematical reading before you receive an offer of a place, and you think you do not need to read *Countdown* Volume 1, you might like to try one or more of the following books:

Mathematics for the Million, Lancelot Hogben, Pan; *Mathematics for Western Culture*, Morris Kline, Pelican; *Concepts of Modern Mathematics*, Ian Stewart, Pelican; *Vision in Elementary Mathematics*, W.W. Sawyer, Pelican; *The Search for Pattern*, W.W. Sawyer, Pelican; *A Path to Modern Mathematics*, W.W. Sawyer, Pelican. Some of these may be out of print but they should be available in libraries.

Set books

There are no set books for the course.

Calculator

You will need to purchase a scientific calculator, which is used throughout the course to explore new ideas and to solve problems. The preparatory package contains a specification of the minimum facilities which the calculator should have, while *Countdown to Mathematics* gives details of how to use a calculator, so that you can become familiar with some techniques before the course starts.

You should note that no calculator which features a full alphabetic character set on or associated with its keys is permitted in the M101 examination.

NON-FOUNDATION MATHEMATICS COURSES FOR WHICH YOU MAY NOW APPLY

Modelling with mathematics: an introduction and An introduction to calculus

As alternatives to the Mathematics foundation course, M101, there are two second-level half-credit mathematics courses available during your first year. These are TM282 *Modelling with mathematics: an introduction*, and MS283 *An introduction to calculus*. You can count only one of these three courses towards your degree, so it is important that you make the right choice between them.

Neither MS283 nor TM282 can be studied alone in your first year; you must take one of them alongside a foundation course (other than M101). Obviously this implies an increased workload, and you should consider carefully whether you could cope with it. Both MS283 and TM282 are available for you to study in subsequent years, so if you are in no hurry to gain credits you may feel it is better to postpone taking one of them until after your first year.

So which, if any, of these three mathematics courses should you take? If your main interest is in mathematics you will unquestionably want to start with the foundation course M101. If you only wish to have a half-credit of maths in your degree you will find TM282 assumes less by way of mathematical background than MS283.

If your main interest is in science or technology, and you choose S102 and/or T102, plus either TM282 or MS283, you will be prepared for some **but not all** higher-level courses with a significant mathematical content.

If you have advanced standing (see page 10) and need to study only one foundation course, you need to know just how much mathematics to include in your degree. M101 is essential if you want to have a substantial amount of maths in your profile. Many technology and physics courses require some mathematical expertise, and M101 would provide a suitable background for these. On

the other hand, if you prefer not to take M101 your choice between MS283 and TM282 may depend on the topics you intend to study later in your degree programme.

In general, TM282 takes the technological approach of using mathematical results without going into too much detail about how those results are achieved, whereas MS283 appreciates that physicists use mathematics as a language and concentrates a little more on the principles involved. In this sense it is more akin to M101.

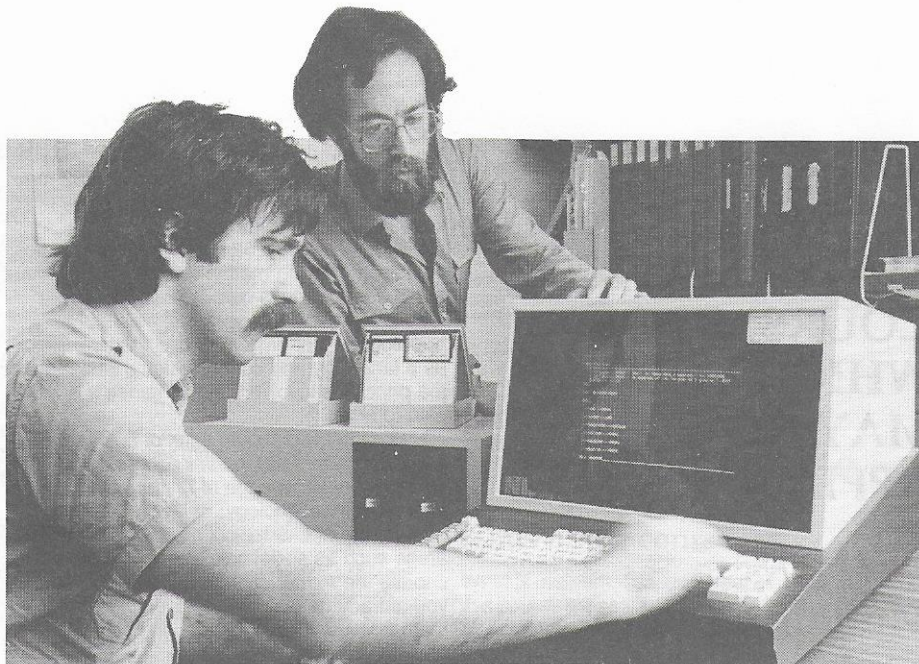
Broadly, you should think of taking the *Modelling with mathematics* course if you have little present knowledge of mathematics; if your interest is in technology; or if you wish to understand mathematical modelling in other areas such as social science. You should choose the *Introduction to calculus* course if you already have some knowledge of mathematics; if you wish to concentrate on physics; or if you intend to study applied mathematics courses at a higher level. The descriptions below will help you in your choice. If after reading them you are still in doubt you should consult your Regional Enquiry Service.

When should you study them?

There are a number of advantages to be gained by studying one of these mathematics half credits in your first year. One is that satisfactory completion of the course will leave you with a range of mathematical skills which match the entry requirements of other courses. Satisfactory completion of *Modelling with mathematics* will leave you ready to study all other second-level technology courses and most second-level science courses. Satisfactory completion of *An introduction to calculus* will prepare you for the full range of second-level science courses, many technology or science/technology courses, and also some mathematics courses. Another advantage is that if you continue to study at the rate of one-and-a-half credits per year you will be able to complete a BA degree in four years.

But beware: against these advantages must be set the hazards of first-year study, and these are considerable. The University has statistics showing that drop-out is more frequent among students who study more than one credit per year. Among first-year students this tendency is particularly strong. Such statistics do not tell how you, as an individual, will manage if you study one-and-a-half credits a year, but they do suggest that for some people the load is likely to be unacceptably high.

In making a decision about first-year study think about your attitude to mathematics and your previous experience of the subject. If you have found mathematics enjoyable and have been able to assimilate mathematical ideas easily, even at a low level, this is a positive indication. If you have successfully studied the subject to A level or have followed HNC courses this again is a positive indication. On the other hand, if you have found mathematics a slog, have succeeded only after excessive hours of study, or have very little mathematical experience you should think of delaying taking either of these courses until your second or a later year of study.



Many maths courses involve the use of computer terminals, which are available at most study centres.

Other things to consider carefully are your own adaptability and the amount of free time you have for study.

Remember that you are about to undertake study by a method which is new to you and which will take some time to get used to. Remember also that you will need up to 14 hours a week for the study of your foundation course and that the additional half-credit will make additional demands of about 14 hours per fortnight. Also bear in mind that taking two courses will commit you to attending two one-week summer schools.

If the indications suggest that you can handle an additional course in your first year and you are generally confident of your learning ability, then go ahead: hundreds of students do this successfully each year. If the indications are against you, wait a year.

MS283

An introduction to calculus

Aims of the course

An introduction to calculus is intended to prepare you for studying higher-level courses in the science and science/mathematics areas. There are two other basic aims:

- To introduce and illustrate some of the methods and language of mathematics, especially those of calculus.
- To introduce the idea of using mathematics to model physical processes.

Outline contents

The course consists of similar material to that in the first three blocks of M101, plus four units covering topics of particular interest to scientists.

The material is organized in four sections. The first is intended to introduce you to the independent study of mathematics. It covers a

number of basic ideas and techniques necessary for the study of later sections.

The material in the second section is intended to help you consolidate the process of mathematical reasoning introduced in the first section, and build a firm basis of techniques for the next two.

Section 3 is an introduction to the ideas and techniques of calculus, and Section 4 an introduction to the treatment of vectors (quantities like force and velocity having direction as well as magnitude).

Broadcasts and cassettes

There are 17 television programmes which are an integral part of the course, so we advise you not to attempt it unless you have access to BBC2 television or to recordings of the programmes. Course materials also include audio cassettes with accompanying visual material.

Summer school

The summer school will enable you to meet other students, to revise and review the work you have done on the course so far, to attend lectures on mathematical topics, and to work in small groups with tutors.

There is an opportunity to do some elementary computing involving the mathematics of MS283, to attempt some simple experiments, and to interpret some experimental results.

Assessment

There are four tutor-marked assignments (TMAs) and six computer-marked assignments (CMAs). There is also a three-hour written examination at the end of the year, and your result in this and your continuous assessment score are combined to give your final course result.

Preparatory advice

This advice is similar to that for M101. Before beginning the course you will need some basic

mathematical skills. The skills required correspond roughly to those covered in the first four years of secondary school maths.

Two books have been written by members of the Mathematics Faculty specifically to help you prepare for MS283. They are: Graham, L. and Sargent, D. (1981) *Countdown to Mathematics* Volumes 1 and 2, Addison-Wesley. When you receive your preparatory package it will include a diagnostic quiz, Volume 2 of *Countdown to Mathematics*, and a booklet which will guide your work on these two items.

Set books

There are no set books for the course.

Calculator

You will need to buy a scientific calculator which is used throughout the course to explore new ideas and to solve problems. The preparatory package includes a specification of the minimum facilities which a calculator for the course should have. *Countdown to Mathematics* (see above) provides details on how to use the calculator, so that you can become acquainted with some techniques before the course starts.

TM282

Modelling with mathematics: an introduction

Modelling with mathematics is a process whereby a problem is simplified so that it can be expressed in mathematical terms: a solution can then be obtained by using mathematical techniques and interpreted in the light of the simplifications made. TM282 is an introductory course written around this process.

It is intended for students who, while not wishing to pursue the full range of mathematical ideas covered in M101, nevertheless need a basic understanding of some mathematical methods and of how to apply them for other post-foundation courses, especially in technology or science.

Aims

- 1 To explain the process of mathematical modelling.
- 2 To introduce a number of standard mathematical models.
- 3 To teach some of the skills, including calculus, needed in the handling of mathematical models.

Content

The course material consists of 16 written units, four audio cassettes, eight television programmes and some additional supplementary material.

Units 1 and 2 introduce the 'modelling cycle' as a systematic technique for modelling,

and show how it can be applied to systems resulting in both linear and non-linear models. Units 3 and 4 tackle basic ideas in geometry and the use and manipulation of vectors. Units 5 to 8 show how differential calculus can be used in models involving rates of change, and develop techniques and further applications of differentiation. Units 9 to 13 cover methods of integration, introducing the subject through the ideas of summation, and discussing applications including finding areas and volumes and town planning models. The units also introduce the important topic of differential equations which occur in many models in science and technology. Units 14 and 15 extend the techniques to oscillating systems like clock pendulums and car suspensions. Unit 16 is a revision unit.

Although a high proportion of study time is necessarily devoted to acquiring mathematical skills, there is throughout the course an emphasis on the modelling process itself, which is considered as important and as intellectually demanding as the mathematical techniques. A booklet of modelling themes is provided which discusses some general areas of interest such as population modelling, town planning, road safety and financial modelling, and reference is made to these themes throughout the course units.

Recommended prerequisites

Students are expected to be familiar with the basic mathematical ideas which are taught in the technology and science foundation courses. If you have not taken either of these, you can still take TM282 if you have a basic knowledge of arithmetic, elementary algebra and some geometry and trigonometry.

A diagnostic quiz is available to help you decide whether your present level of mathematics is sufficient. Students who feel that they need to brush up their elementary mathematics are advised to study *Countdown to Mathematics* by Graham and Sargent, published by Addison-Wesley (Volumes 1 and 2).

Related courses

TM282 is a useful introduction to the mathematics needed in several second-level

technology and science courses. It should not, however, be regarded as a substitute for the mathematics foundation course if you intend to take further mathematics courses.

Broadcasts and cassettes

Eight television programmes reinforce the modelling aspect of the course. Detailed broadcast notes are provided. There are four audio cassettes which are used to teach many of the mathematical skills, using notes with worked problems and self-assessment questions.

Summer school

The summer school will provide you with considerable practice in both mathematical techniques and mathematical modelling of real problems. Lectures followed by example sessions, modelling projects and an extensive tutorial programme make up the bulk of the week. A mock exam gives you practice in answering questions under examination conditions. You are not assessed on your work at the summer school.

Assessment

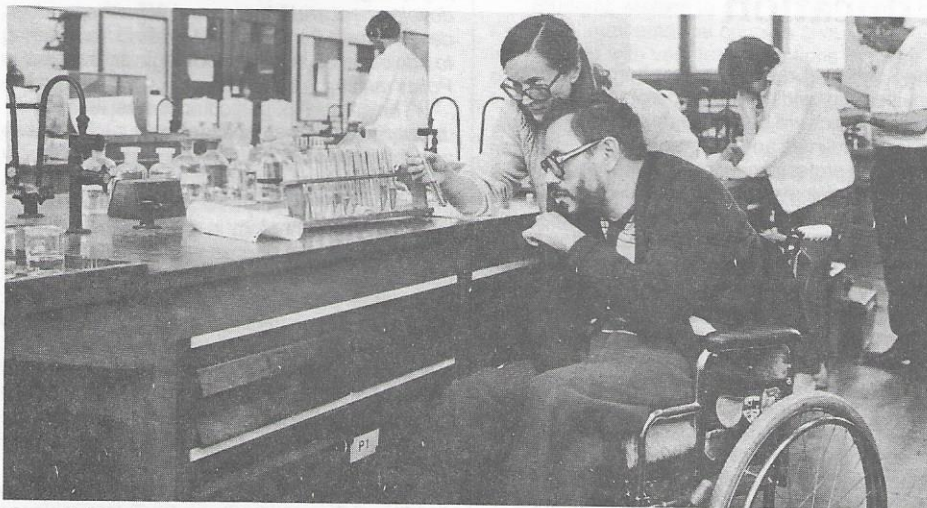
There are seven tutor-marked assignments, five computer-marked assignments and a final exam.

Calculator

You will need to have a battery-operated hand-held calculator. No particular model is recommended, but your calculator should have the following functions to six-figure accuracy: addition, subtraction, multiplication, division; exponentials, natural logarithms, squares and square roots; and should be capable of manipulating degrees, radians, sines, cosines and tangents. It would be useful if the calculator were multiplication dominant and had a memory.

You will not be allowed to use a calculator which can plot graphs on its display in the TM282 examination. You are advised not to use such a calculator at all for TM282.

Note that there is no computing element in TM282.



Open University study can be particularly suitable for people with disabilities

FACULTY OVERVIEWS

In this section we give an overview of the courses offered by each faculty, and some comments and advice which may help you to start thinking about the general direction of your degree studies.

Arts

The first half of the arts foundation course introduces each of the five main disciplines taught in the Faculty: history, literature, music, art history and philosophy. The rest of the course builds on these introductions with an interdisciplinary study of Victorian culture and society 1850-1890.

At second level interdisciplinary work is extended and consolidated; the two main courses are *Culture and belief in Europe 1450-1600* and *The Enlightenment*. Interdisciplinary work of a slightly different nature is available in a 'pair' of half-credit courses dealing with the ancient world, *Fifth-century Athens: democracy and city state* and *Rome, the Augustan age*.

Also at second level is a half-credit on *The religious quest* and two half-credits on *Technology and change 1750-1914* and *Science, technology and everyday life 1870-1950*.

Because of the technical needs of music there is a second-level half-credit on the *Elements of music*, designed for those who want to go on to more specialized work in music at third level.

Only at third (that is, honours) level does specialized single-discipline work begin. Each of the five major disciplines normally offers two full credits at this level. Additionally, interdisciplinary work at third level is offered by two half-credit courses, *Religion in Victorian Britain and Liberalism and reconstruction: politics, culture and society in France and Italy 1943-54*. The Arts Faculty profile is rounded off by the fourth-level project course *Arts and society in Britain since the Thirties*.

The Faculty recommends to students that in addition to its own courses they should do at least one University-wide course, or one from social sciences or another faculty. Among those most appropriate are the 'U-courses' on *The changing experience of women* and *Third World studies*.

By judicious selection of 'core courses' from the Arts Faculty and a range of options from Arts and other faculties it is possible to put together a well-structured degree with emphasis on any of the following:

- History
- History of art
- Literature
- Music
- Philosophy
- History of science
- Classical and religious studies

Social sciences

The Social Sciences Faculty provides courses which will interest those whose main purpose is to understand more about the society of which they are members, as well as courses which are more specifically directed to people who want to make a career in social science, or use aspects of the social sciences in their work.

The foundation course addresses the question of how society changes. It investigates social institutions such as the economy, government, and the mass media. In this way the course introduces the disciplines of economics, geography, political science, psychology and sociology, and the theories they offer. As is often the case, a number of issues have too many aspects to be satisfactorily studied by any single discipline, and therefore much of the course is interdisciplinary in nature.

At second level the interdisciplinary approach is continued with four full-credits' worth of such studies: *Decision making in Britain*, *State and society*, *Social problems and social welfare*, and *Introduction to information technology*.

The other main focus at second level is the introduction of individual disciplines. Courses of this kind include *Changing Britain, changing world: geographical perspectives*, *An introduction to economics*, *An introduction to sociology*, and *An introduction to psychology*.

Again at third level there is a mix of both single discipline and interdisciplinary courses. Economics, politics and psychology are represented among the single discipline courses. In the interdisciplinary area are courses on *Crime, justice and society*, *Social policy and social welfare*, *Professional judgment*, and *Restructuring Britain*. Finally at this level the Faculty offers a full credit course on *Research methods in education and the social sciences*.

At fourth level a small number of guided study courses are available to enable students to investigate topics at greater depth.

School of Education

The School of Education differs from the other faculties in providing both undergraduate courses which will be of interest to a wide general audience and a programme of advanced professional development courses – advanced diplomas and an MA in Education – which are primarily for teachers and other professionals already working in education.

Most of its undergraduate courses are definitely **not only for teachers**, and because there is no education foundation course, students on School of Education post-foundation courses come from a wide variety of backgrounds, having taken any one of the foundation courses provided by the other faculties. They may be people who have an interest in education because of its central place in society or because of their roles as parents or school governors; or they may wish to expand their studies in a particular discipline



Practising teachers can use Open University courses to update their professional skills and apply new technology in the classroom.

such as psychology, sociology or administration.

For those who have not previously studied education topics, the full-credit course at second level, *Exploring educational issues*, is probably the best place to begin. It ranges widely over such topics as parental involvement in children's education, teaching methods, the design and function of exams, school organization and finance, gender issues, multi-culturalism, special needs, and the relationship between education and the economy. It incorporates a range of perspectives on these issues, from psychology, sociology, economics, philosophy, history, etc, many of which can be pursued in greater depth through more specialised courses.

Two other multi-disciplinary courses of interest to the generalist audience are *Communication and education*, which examines the ways in which language, communications media and learning interrelate; and *Education for adults*, which is an introduction to this developing field.

Other courses apply the social sciences to education and are of particular interest to people who are looking for a more theoretically based understanding of contemporary educational issues. They include the psychology of education courses *Personality, development and learning* and *Cognitive development: language and thinking from birth to adolescence*, and the sociologically inclined *Policy making in education*.

The courses of particular interest to those directly involved in education cover such areas as curriculum planning and evaluation, educational management (both in schools and in the post-compulsory sector), special needs in education, technology in schools, educational computing, and mathematics. It is in these areas that the School now offers a programme of advanced diplomas; students gaining credits on these courses will, in certain circumstances, be able to count them towards a diploma. There is also a Professional Diploma in Post-Compulsory Education. (Registration for advanced diplomas is through the University's Continuing Education Programme. Details can be obtained from the Associate Student Central Office at the address on page 28.) The diploma programme feeds into a modular taught master's degree in education.

Mathematics

Most courses produced by the Mathematics Faculty fall into four main areas – pure mathematics, applied mathematics, computing and statistics. Each of these is introduced in the mathematics foundation course and is followed up by a corresponding second-level course.

The full-credit second-level course *Introduction to pure mathematics* covers algebra, geometry and analysis. It serves as a prerequisite for several third-level courses: *Differential geometry*, *Complex analysis*, *Aspects of abstract algebra*, and *Studies in pure mathematics*.

The full-credit second-level course in applied mathematics, *Mathematical models and methods*, deals first with mathematical methods, developing both calculus and matrix techniques. It goes on to examine mathematical models which use such methods to solve real-world problems. This course serves as a prerequisite for the third-level courses *Mathematical methods and fluid mechanics* and *Quantum mechanics* (Science Faculty) and is good preparation for two other third-level courses, *Electromagnetism* and *Understanding space and time*, also from the Science Faculty.

An additional course in the applied mathematics area, which has, however, strong links with computing, is the third-level *Computational mathematics*.

The half-credit third-level course on *Graphs, networks and design* (Technology Faculty) is also relevant to the applied mathematics area.

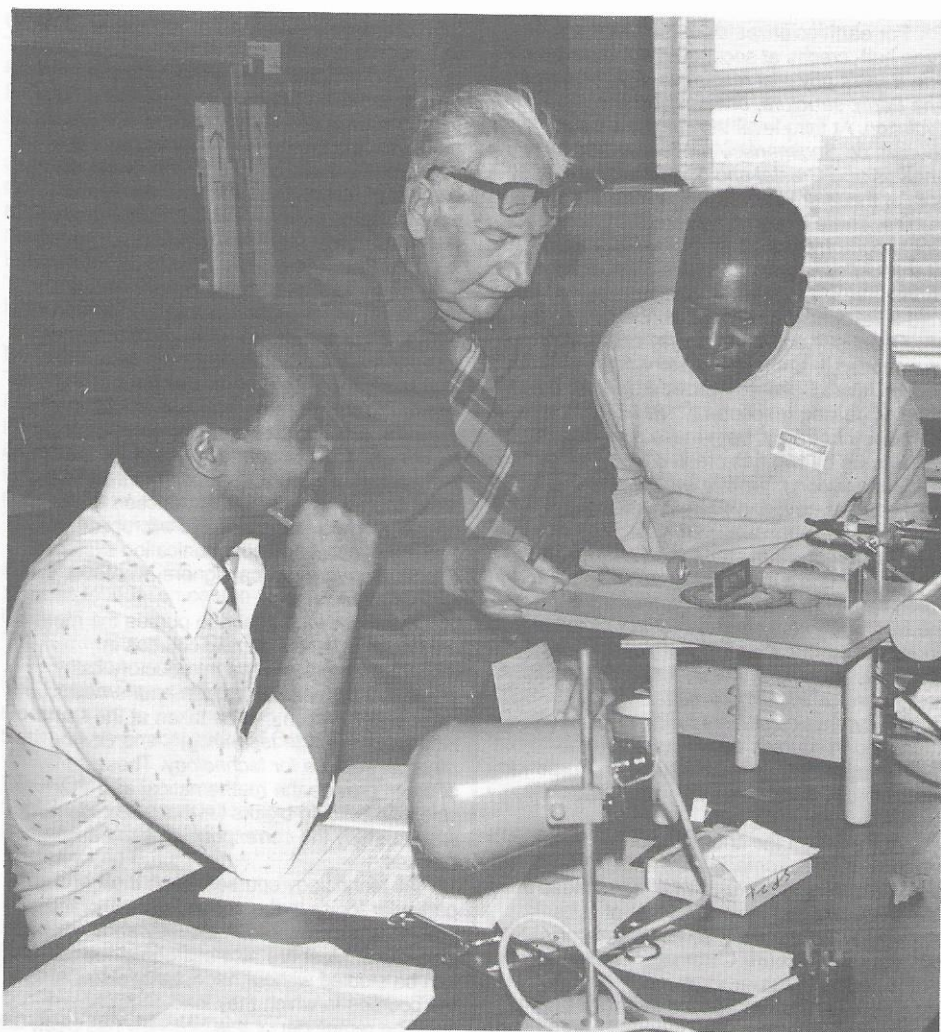
The full-credit second-level course *Fundamentals of computing* has no specific prerequisite. It is a first general course in computer science, and it concentrates on the design and implementation of good software. The course serves as a prerequisite for the third-level *Computer-based information systems* and *Programming and programming languages*.

Also available is the second-level half-credit *Mathematics in computing*, which introduces the mathematics necessary for formal approaches to computing.

There are two half-credit second-level courses, *Statistics in society* and *Probability and statistics*. The second of these serves as preparation for both the third-level statistics courses, *Statistical methods* and *Applications of probability*.

Any student requiring what might be described as a 'general' degree in mathematics would be well advised to take the pure and applied full-credit second-level courses with *Probability and statistics*. With the foundation course, this would be a total of three-and-a-half credits towards the total of six required for a BA. A second foundation course, perhaps in science or technology to accompany the applied mathematics, would make four-and-a-half. If the remaining one-and-a-half credits are to be taken in the broad area of mathematics then the two basic options are either to broaden the degree or to attempt some small measure of specialization.

If the decision is taken to broaden the degree then some appropriate courses to consider are: *Topics in the history of*



Students following science and technology courses in the Open University get opportunities for laboratory experience at weekend and summer schools.

mathematics, *The digital computer* (Technology Faculty), *Statistics in society*, *Fundamentals of computing*, and, for teachers, *Using mathematical thinking* and *Developing mathematical thinking* (School of Education).

Students wishing to specialize by taking third-level mathematical courses should be warned that with very few exceptions they are a quantum jump more difficult than the second-level courses in the same way that second-level courses are more difficult than the foundation course. For this reason students are advised not to attempt a third-level course until they have passed the recommended prerequisites.

Certain combinations of Open University mathematics courses are regarded as equivalent to an honours degree by other institutions, for example, for the purpose of recognition as a graduate of the Institute of Mathematics and its Applications.

Science

The Science Faculty has two major aims in its courses for undergraduates. The first is to enable students to achieve a general honours degree with an emphasis on one science discipline; to this end, each discipline plans to provide one-and-a-half or two credits at third level, supported by suitable preparation at second level. The second aim is to provide students who want a broadly based ordinary degree with an adequate choice of interesting and useful second-level courses.

The Faculty's four disciplines are biology, earth sciences, chemistry and physics. All of these are introduced in the Science foundation course, which provides the basis on which any of the second-level courses can be tackled.

The number of higher-level courses is broadly comparable in each area. Biology, for example, has the full-credit *Biology: form and function* at second level, plus two half-credits: *Biology, brain and behaviour* and *Genetics*. These lead on to four half-credit courses at third level: *Biochemistry and cell biology*, *Ecology*, *Animal physiology* and *Evolution*.

For earth sciences students there are three half-credits at second level, dealing with *The Earth's physical resources*, *Geology*, and *The Earth: structure, composition and evolution*. At third level the discipline offers courses on *Sedimentary processes and basin analysis* and *Crustal and mantle processes*; both of these are tackled in the form of case studies. There is also a half-credit in *Oceanography* which has a broader, more interdisciplinary approach. The *Evolution* course already mentioned is also designed as a third-level course for earth sciences students.

Chemistry and physics may both be approached through introductory courses at second level. Chemistry provide two half-credit courses dealing respectively with *Organic* and *Inorganic chemistry*. Both these aspects are followed up by two half-credit courses at third level. In addition there are two half-credit third-level courses covering *Photochemistry* and *Physical chemistry*.

Those who want a specific introduction to physics will find it in the second-level half-credit *Discovering physics*. Also at this level is the half-credit *Images and information*, a comprehensive account of both optical and electronic imaging systems, and a half-credit course on the *Physics of matter*.

Many physics students will also be interested in courses administered by the Mathematics Faculty such as *An introduction to calculus* and *Mathematical models and methods*.

At third level the choice includes *Quantum mechanics*, *Electromagnetism* and *Understanding space and time*. All of these are half-credits, but it is expected that physics students will complete their honours 'profile' by including some courses from the Technology or Mathematics Faculties.

There is a further second-level half-credit course presented jointly by the physics and chemistry disciplines entitled *Matter in the Universe*. This is a fascinating course for any student wishing to complete a degree profile in physics, chemistry, or earth sciences.

One general point should be made about science courses. In almost all of them practical experimental work is involved. This is essential to the comprehension of the subject and to the credibility of the degree. For this reason students should be sure they can cope with the experimental work at home, using the kits provided with many courses, and also that they can attend summer schools, as excusals are not easily granted. Some summer schools are based on disciplines and serve more than one course; when planning science courses it may be advantageous (though not essential) to study two such courses simultaneously.

Technology

Courses in technology are designed to meet the needs of a wide variety of students, ranging from those who want to know enough about technology to understand its effects and some of the principles that it depends on, to those who want to acquire professional skills and understanding in specific areas of technology.

In particular the foundation course *Living with technology* is designed both for those who may study only one technology course and

those for whom it provides the stepping stone to a degree in technological subjects. Its aim is to set some of the many technological developments in the context of people's everyday lives and to discuss both the problems and the benefits they bring. It also introduces the use of a home computer, a number of technical subjects, and helps to develop study skills as well as literacy and numeracy skills.

The Faculty's interest in the 'why' of technology as well as the 'how' is reflected in courses at second level. In addition to courses from the five disciplines – design, electronics, engineering mechanics, materials, and systems – there are courses based on interdisciplinary topics like *Food production systems*, *Environmental control and public health* and *Introduction to information technology: technical and social issues*. The latter course provides an introduction to the operations and implications of microcomputers and their associated communication systems – a topic area that few can ignore, whatever their main area of interest.

For those who intend to pursue the more mathematical and scientific courses in technology there are two introductory half-credit courses: *Modelling with mathematics: an introduction* (which can be taken at the same time as *Living with technology*), and *Basic physical science for technology*. These courses provide the mathematical and scientific building blocks for those who do not wish to study the corresponding foundation courses.

All technology courses teach their particular topics in the context of real, practical problems encountered in industry and elsewhere. Most are also self-contained and so can be studied without necessarily also taking the courses to which they lead.

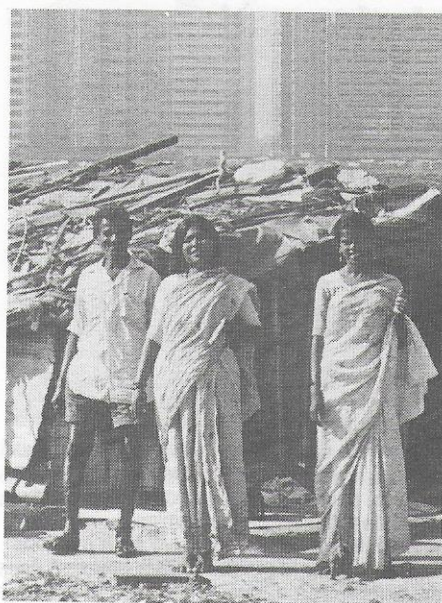
The remainder of this overview has been arranged for convenience by disciplines, but many coherent degree profiles can be constructed across disciplines. In particular, systems and design courses are applicable to all other fields of technology.

Design courses are concerned with the creative processes that generate new products, systems, and other developments in technology. At second level *Design: processes and products* leads on to *Design and innovation*, *Engineering product design*, *Computer-aided design*, and the interfaculty course *Graphs, networks and design*.

In electronics and communications the second-level courses *Analogue and digital electronics* and *Instrumentation* and the interfaculty course *The digital computer* prepare students for *Control engineering*, *Electronic signal processing* and the interdisciplinary course *Electronic materials and devices* at third level.

In engineering mechanics the second-level courses *Engineering mechanics: solids*, *Thermofluid mechanics and energy* and *Environmental control and public health*, as well as the interdisciplinary course *Instrumentation*, lead on to the third-level course in *Engineering mechanics: solids and fluids* and *Environmental monitoring and control* as well as to the interdisciplinary courses in *Control engineering* (which is shared with electronics) and *Engineering product design*.

In the subject of materials there are second-level half-credit courses which deal



An illustration from the 'U' course dealing with the Third World. Photo: Margaret Murray.

with materials for electronic and structural applications and with problems encountered in manufacturing with materials. These lead on at third level to the interdisciplinary courses *Electronic materials and devices* and *Engineering product design*. A full-credit course *Materials in action* encompasses all the topics dealt with at second level and provides a gateway to the third-level courses mentioned.

Systems courses deal with the problems of complexity in industrial and other kinds of organization. At second level *Systems behaviour*, *Managing in organizations* and *Food production systems* introduce the subject, and lead on to the third-level full-credit *Complexity management and change*.

The Faculty's profile of courses culminates with the fourth-level *Technology project*, which enables students to bring the knowledge and skills they have learnt to bear on a substantial practical task. This is an essential course for those looking for professional competence.

'University' or 'U-courses'

These courses are grouped together not because of any similarity in subject matter, but because they share a similar approach. They begin with a topic, rather than a discipline, and examine it from a variety of academic standpoints.

Such courses may appeal to students of varied backgrounds, interests and tastes. They may be taken to complement, extend or contrast with the courses offered by any of the faculties.

The University currently offers two full-credit and two half-credit U-courses: *Health and disease*, *Third World studies*, *The changing experience of women*, and *Nuclear weapons: inquiry, analysis and debate*.

COURSES YOU CAN TAKE AFTER YOUR FIRST YEAR

In this list we have grouped related courses—at foundation and higher levels—under subject headings. The same course may therefore appear under several headings.

The list is presented in this way to give applicants some ideas about the range of subjects they can study in later years, but it should be emphasized that **there are no regulations which compel undergraduates to choose courses within the groupings given here.** You can choose any courses which meet your needs and interests.

You should also bear in mind that the undergraduate programme is not static. Each year new courses are added and existing ones are revised or replaced. This list does, however, give a reasonable indication of the range of subject matter likely to be available in the immediate future.

Detailed descriptions of all current and planned courses are issued to undergraduates in the spring of each year. You will have opportunities to discuss your plans for your degree profile with University staff, in particular your tutor-counsellor.

ART HISTORY

Arts foundation course
The Enlightenment
Modern Art and Modernism: Manet to Pollock
Art in Fifteenth-Century Italy
Arts and Society in Britain since the Thirties
Fifth-Century Athens: Democracy and City State
Rome: the Augustan Age

BIOLOGY

Science foundation course
Biology: Form and Function
Biology, Brain and Behaviour
Animal Physiology
Biochemistry and Cell Biology
Ecology
Evolution
Genetics

CHEMISTRY

Science foundation course
Organic Chemistry
Inorganic Chemistry: Concepts and Case Studies
Organic chemistry: a synthesis approach
Matter in the Universe
Photochemistry: Light, Chemical Change and Life
Physical Chemistry

CLASSICAL STUDIES

Arts foundation course
Fifth-Century Athens: Democracy and City State
Rome: the Augustan Age

COMPUTING AND COMPUTERS

Technology foundation course
Mathematics foundation course
Introduction to Information Technology
Fundamentals of Computing
The Digital Computer
Computational Mathematics
Computer-aided Design
Mathematics in Computing
Programming and Programming Languages
Educational Computing
Topics in Software Engineering
Data models and Databases

DESIGN

Technology foundation course
Design: Processes and Products
Design and Innovation
Computer-aided Design
Engineering Product Design
Graphs, Networks and Design
Technology project

EARTH SCIENCES

Science foundation course
Geology
The Earth: Structure, Composition and Evolution
The Earth's Physical Resources
Oceanography
Sedimentary Processes and Basin Analysis

ECONOMICS

Social sciences foundation course
Decision Making in Britain
Restructuring Britain
State and Society
Introduction to Economics
Economics and Government Policy
Probability and Statistics
Third World Studies

EDUCATION AND SOCIETY

Exploring Educational Issues
Communication and Education
Special Needs in Education
Policy Making in Education
Education for Adults

EDUCATION, PSYCHOLOGY OF

Exploring Educational Issues
Personality Development and Learning
Special Needs in Education
Developing Mathematical Thinking
Using Mathematical Thinking
Cognitive Development: Language and Thinking from Birth to Adolescence
Research Methods in Education and the Social Sciences

EDUCATIONAL POLICY, MANAGEMENT, AND CURRICULUM DEVELOPMENT

Managing Schools
Management in Post-compulsory Education
Policy Making in Education
Exploring Educational Issues
Purpose and Planning in the Curriculum
Educational Computing
Special Needs in Education
Education for Adults

ELECTRONICS

Technology foundation course
Mathematics foundation course
Science foundation course

Basic Physical Science for Technology
Introductory Electronics
Instrumentation
The Digital Computer
Electronic Signal Processing
Electronic Materials and Devices
Control Engineering
Introduction to Information Technology

ENGINEERING DESIGN

Technology foundation course
Mathematics foundation course
Basic Physical Science for Technology
Engineering Product Design
Design and Innovation
Design: Processes and Products
Computer-aided Design
Instrumentation

ENGINEERING MECHANICS

Technology foundation course
Mathematics foundation course
Science foundation course
Modelling with Mathematics: an Introduction
Basic Physical Science for Technology
Engineering Mechanics: Solids
Engineering Mechanics: Solids and Fluids
Thermofluid Mechanics and Energy
Engineering Materials: an Introduction
Materials in Action
Instrumentation
Engineering Product Design
Control Engineering

EUROPEAN STUDIES

The Enlightenment
Fifth-Century Athens: Democracy and City State
Rome: the Augustan Age
Liberation and Reconstruction: Politics, Culture and Society in France and Italy 1943-1954
Reason and Experience
From Baroque to Romantic: Studies in Tonal Music
Modern Art and Modernism: Manet to Pollock
Art in Fifteenth-Century Italy

GEOGRAPHY

Social sciences foundation course
Changing Britain, Changing World: Geographical Perspectives
Restructuring Britain
Ecology
Oceanography
Third World Studies

GEOLOGY

see *Earth Sciences*

GOVERNMENT AND POLITICS

Social sciences foundation course
Decision Making in Britain
State and Society
Global Politics
Democratic Government and Politics
Social Problems and Social Welfare
Economics and Government Policy
Crime, Justice and Society
Nuclear Weapons: Inquiry, Analysis and Debate
Restructuring Britain
Policy Making in Education
Liberation and Reconstruction: Politics, Culture and Society in France and Italy 1943-1954

HISTORY

Arts foundation course
The Enlightenment
Restructuring Britain
Science, Technology and Everyday Life 1870-1950
Religion in Victorian Britain
Themes in British and American History: a Comparative Approach 1760-1970
Arts and Society in Britain since the Thirties
Liberation and Reconstruction: Politics, Culture and Society in France and Italy 1943-1954
Topics in the History of Mathematics
Technology and Change c1750-1914
Fifth-Century Athens: Democracy and City State
Rome: the Augustan Age
Art in Fifteenth-Century Italy
Global Politics

LITERATURE

Arts foundation course
The Enlightenment
Shakespeare
Romantic Poetry
Arts and Society in Britain since the Thirties
Fifth Century Athens: Democracy and City State
Rome: the Augustan Age

MANAGEMENT

Social sciences foundation course
Technology foundation course
Introduction to Economics
Systems Behaviour
Managing in Organizations
Complexity, Management and Change: Applying a Systems Approach
Managing Schools
Management in Post-Compulsory Education

MATERIALS

Living with Technology
Science foundation course
Basic Physical Science for Technology
Engineering Mechanics: Solids
Thermofluid Mechanics and Energy
Failure of Stressed Materials
Engineering Product Design
Electronic Materials and Devices
Materials in Action
Materials for Electronics
Materials for Manufacturing
Stress on Materials

MATHEMATICS, PURE

Mathematics foundation course
Introduction to Pure Mathematics
Complex Analysis
Aspects of Abstract Algebra
Differential Geometry
Studies in Pure Mathematics
Topics in the History of Mathematics

MATHEMATICS, APPLIED

Mathematics foundation course
An Introduction to Calculus
Modelling with Mathematics: an Introduction
Mathematical Models and Methods
Mathematical Methods and Fluid Mechanics
Introduction to Non-linear Dynamics
Mathematics in Computing
Computational Mathematics
Quantum Mechanics
Applications of Probability
Topics in the History of Mathematics

Graphs, Networks and Design

METHODOLOGY

Social sciences foundation course
Research Methods in Education and the Social Sciences
Managing in Organizations
Probability and Statistics
Mathematical Models and Methods
Statistical Methods
Statistics in Society
Complexity, Management and Change

MUSIC

Arts foundation course
The Enlightenment
Elements of Music
Beethoven
From Baroque to Romantic: Studies in Tonal Music
Arts and Society in Britain since the Thirties

PHILOSOPHY

Arts foundation course
The Enlightenment
Reason and Experience
Life and Death
Arts and Society in Britain since the Thirties
Fifth-Century Athens: Democracy and City State
Rome: the Augustan Age
The Religious Quest

PHYSICS

Science foundation course
An Introduction to Calculus
Discovering Physics
Images and Information
Matter in the Universe
Physics of Matter
Quantum Mechanics
Electromagnetism
Understanding Space and Time
Mathematical Models and Methods
Introduction to Non-linear Dynamics
Mathematical Models and Fluid Mechanics

PSYCHOLOGICAL STUDIES

Social sciences foundation course
Introduction to Psychology
Cognitive Psychology
Social Psychology
Personality Development and Learning
Cognitive Development: Language and Thinking from Birth to Adolescence
Biology, Brain and Behaviour
Research Methods in Education and the Social Sciences

PUBLIC ADMINISTRATION

Social Sciences foundation course
Decision Making in Britain
Crime, Justice and Society
Statistics in Society
Social Policy and Social Welfare
Environmental Control and Public Health
Environmental Monitoring and Control
Managing Schools
Management in Post-compulsory Education
Policy Making in Education
Economics and Government Policy
Health and Disease
Work and Society
Complexity, Management and Change
Communication and Education

RELIGIOUS STUDIES

Arts foundation course
The Religious Quest
Life and Death
Fifth-Century Athens: Democracy and City State
Rome: the Augustan Age
Religion in Victorian Britain
Arts and Society in Britain since the Thirties

SOCIAL STUDIES, APPLIED

Social sciences foundation course
Restructuring Britain
Decision Making in Britain
State and Society
Changing Britain, Changing World
Social Policy and Social Welfare
Health and Disease
Crime, Justice and Society
Work and Society
Nuclear Weapons: Inquiry, Analysis and Debate
Beliefs and Ideologies
Special Needs in Education
The Changing Experience of Women
Third World Studies
Education for Adults

SOCIOLOGY

Social sciences foundation course
Restructuring Britain
State and Society
An Introduction to Sociology
Research Methods in Education and the Social Sciences
Crime, Justice and Society
Social Policy and Social Welfare
Work and Society
Education for Adults
Third World Studies
The Changing Experience of Women

STATISTICS

Statistics in Society
Probability and Statistics
Statistical Methods
Application of Probabilities

SYSTEMS

Systems Behaviour
Managing in Organizations
Complexity, Management and Change: Applying a Systems Approach
Food Production Systems
Modelling with Mathematics: an Introduction

TWENTIETH-CENTURY STUDIES

Science, Technology and Everyday Life 1870-1950
Modern Art and Modernism: Manet to Pollock
Themes in British and American History: a Comparative Approach c1760-1970
Arts and Society in Britain since the Thirties
Liberation and Reconstruction: Politics, Culture and Society in France and Italy 1943-1954
Restructuring Britain
Nuclear Weapons: Inquiry, Analysis and Debate
Crime, Justice and Society
Exploring Educational Issues
Policy Making in Education
Third World Studies
The Changing Experience of Women
Health and Disease

HOW TO BECOME A STUDENT

3

APPLICATION AND REGISTRATION

This section describes the admissions procedure. Please make sure you understand the sequence of events. The University will expect you to take the appropriate action when required.

When to apply

You can apply now for admission to the Open University's BA degree programme. The application period for 1990 courses closes on Friday 29 September 1989, but you should send in your application as early as you can. **Early application improves your chances of getting a place.**

Eligibility

You need no previous educational qualifications. You must be resident in the UK when teaching on the course begins in February 1990, and aged 18 or over on 31 December 1989.

The University is keen to encourage applications from all sections of the community, regardless of race, sex, age, occupation, marital status, religious beliefs, previous educational experience or any other form of distinction. Its admissions policy reflects a commitment to equal opportunity of access to study. The only factors which affect the offer of a place are the date of application and the number of places available.

Any personal information you give on the application form will be treated as confidential. We ask certain questions about your background which help us to assess how successful our equal opportunity policy is in practice. We hope you will not be offended by these questions, but you are under no obligation to answer them and this will not affect your chances of being offered a place.

If you are a full-time student elsewhere we will need the written approval of an officer of your institution before we can admit you.

Which courses to choose

You can apply only for the courses described on pages 12-19. You should be genuinely prepared to study **any** of the courses you apply for, because you may not be offered a place on the course of your first choice.

As a rough guide, most students spend about 12 to 14 hours a week on each full-credit course. Therefore, if you choose to take two foundation courses in your first year, you will need something like 24 hours each week from February to October for your studies. For the half-credit mathematics courses TM282 and MS283 you need 12 to 14 hours spread over each fortnight in the same period.

Your first fee, the 'initial tuition fee', entitles you to full support services, including tuition, until April 1990. If you start two courses you will have an opportunity then to decide whether to continue with both or to drop one.

Rules about course choice

You must take not less than one foundation course in your first year. Apart from foundation

courses, the only courses you can take in your first year are one or other of the two half-credit mathematics courses, TM282 and MS283 (see pages 17-19).

Your BA or BA(Honours) degree must include two foundation courses, unless you are awarded credit by advanced standing – see below. You need not take both foundation courses in your first year; most students choose to do one. You must complete both successfully within your first six credits. When you have gained a foundation course credit you can go on to take courses at higher level.

You need to pass a foundation course (or one of the half-credit introductory mathematics courses) within four years, otherwise your registration as an undergraduate may be cancelled.

Advanced standing

You may be eligible for advanced standing if you have previously completed study elsewhere at higher educational level. The two schemes of advanced standing are described on page 10.

You can get a claim form and an explanatory leaflet by writing to the Advanced Standing Office (address on page 28) or using the application form (question D4). If you wish to be considered under the scheme of directly transferred credits you must submit a claim by mid-August 1989.

How places are allocated

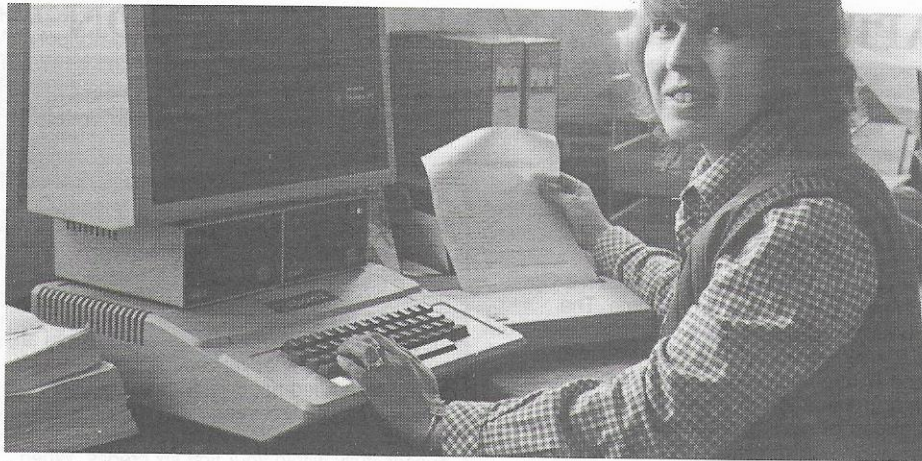
There is a quota for each foundation course to keep a balance between the numbers of students taking each course. We also have to ensure that each region receives a share of the places available. The main criterion is the date you apply: the earlier your application is recorded the better your chance of getting a place.

Because the University receives many more applications each year than it has places you may have to wait another year before you can start. If we cannot offer you a place the first year we try to make sure that you get an offer for a course the following year. After the end of the application period applicants without places are sent a slip asking whether they want their application carried forward to the following year. Returning this by the deadline given ensures that you get precedence over new applicants without having to fill in another application form.

Offers of places

We start offering places in March/April. By the end of July the majority of offers will have been made. Depending on how many are taken up, more may be made at intervals until October.

You will know that you are on the waiting list for an offer when you receive a letter



Regional Centres work closely with the Walton Hall headquarters and have instant access to central computer records.

confirming receipt of your application and giving you a personal reference number. Always use this number when you write to us. If you apply during the period when offers are being made, and there is a place available, you could receive an offer immediately.

Registration

From the date the offer is made you are given a few weeks to decide whether to accept or not. If you sign the form attached to the offer letter indicating acceptance you then become **initially registered** as an undergraduate student and liable for payment of the initial tuition fee. (If you need help or advice either before or after accepting an offer, contact your Regional Enquiry Service.) At the same time you will be asked to make arrangements to pay the first fee, or to apply for a grant or loan.

Changing information on your application form

If you change your address we need written confirmation. Preferably, use the postcard enclosed with this *Guide* – and be sure to quote your personal reference number. The details should be sent to your current Regional Centre, i.e. the one you quoted on your application form.

If you change your name the University needs written notification supported by the original certification (marriage certificate, deed poll etc). You can wait until you are initially registered to do this.

If you decide to withdraw, again we need written confirmation. A card is enclosed for this purpose. Contact your Regional Centre before taking this step if you have any doubts about it.

Advice

If you have any doubts or queries not answered in this *Guide*, we suggest that you apply now and then seek the answers from us. Your application form can be altered or withdrawn at any time before you accept the offer of a place and before you have incurred any liability for fees.

Please write to the Regional Enquiry Service in your region (addresses pages 28-30) at the same time as or after you send your application form if you would like any advice or if you have any queries about study or your choice of course. Your Regional Centre may then telephone or write to you; or you may be invited to discuss your application at your local study centre. This will not be a selection interview, just an opportunity to discuss your study plans.

FEES AND FINANCIAL AWARDS

Financial help from the University

The University has schemes which help students facing financial difficulties to pay tuition and summer school fees:

- **Instalment facilities**, available to all students, allowing a series of payments over an extended period;
- **Grants**. The University's Financial Awards Committee is responsible for administering a number of funds established to help applicants and continuing students who are experiencing financial difficulties in pursuing their studies with the University. One fund is specifically for those who are unemployed.

If you are offered a place, full information about financial awards will be included with your offer letter.

Each year we help many applicants who have been unable to afford the fees. So, if you wish to apply but are worried about the cost, please go ahead; we will do our best to help. Once you have applied for a place you can contact your Regional Enquiry Service to discuss the financial implications of becoming a student.

Financial awards from other sources

Unlike full-time students who are entitled to grants from their local authority, as a part-time student you will not qualify for help in this way. Any grant you are able to obtain will be at the discretion of your education authority. You are advised to ask your authority as soon as possible what financial support they are willing to give to Open University students.

Most local education authorities give financial support to those students who are required to attend summer school as an integral part of their studies. The majority of local authorities have, in the past, contributed towards both the cost of the summer school and the associated travelling expenses, but current economic policies may force them to reassess the amount of grant they can afford to give.

Some local authorities may also be prepared to give further awards to students who can show evidence of particular financial hardship, and some give support towards tuition fees.

There are three further points to note in connection with grants to Open University students:

- (a) Local authorities define a course as a one-year self-contained course leading to an undergraduate credit.
- (b) The authorities normally make discretionary grants in respect of a course (or two courses if taken concurrently) for one year; this has the implication that a student must apply again for grant support for a subsequent course in a subsequent year.
- (c) The authority in whose area of responsibility the student resides on 31 October preceding the year in which the course is taken is responsible for his or her grant and will continue to be responsible in that year, even if the student moves to the jurisdiction of another authority.

In addition to local authority support, employers are sometimes willing to pay tuition fees for their employees. There is also a wide variety of training boards, trade unions and other agencies who might be prepared to provide grants. Your local library may have reference books listing sources of funds.

Initial tuition fee

When you accept the offer of a place you also accept liability to pay the initial tuition fee in full: it must be paid within the timescale given in the offer letter to ensure your continued registration as an undergraduate.

Final tuition fee

In March/April 1990 you will be invited to complete final registration. Payment of the final tuition fee will enable you to complete your 1990 course(s). As a finally registered undergraduate you will also be guaranteed registration for further courses in subsequent years.

Please note also that final registration will commit you to the payment of summer school fee(s) – see below and page 8.

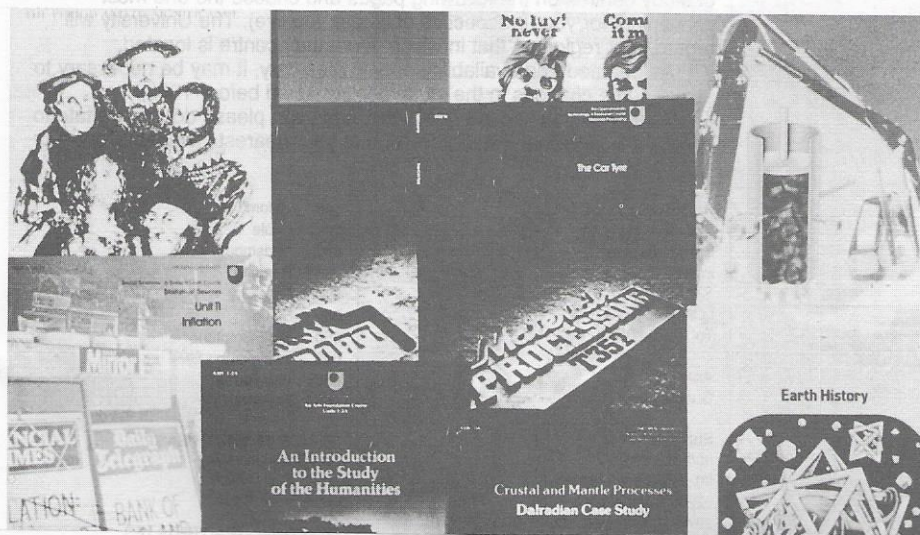
If at that time you decide that studying for a degree with the Open University is not for you, you can of course choose not to accept

the offer of final registration.

If you initially register for two courses, but prefer to continue with just one foundation course, you will be able to withdraw from the second and will only be liable to pay the final tuition fee for one foundation course.

Summer school fees

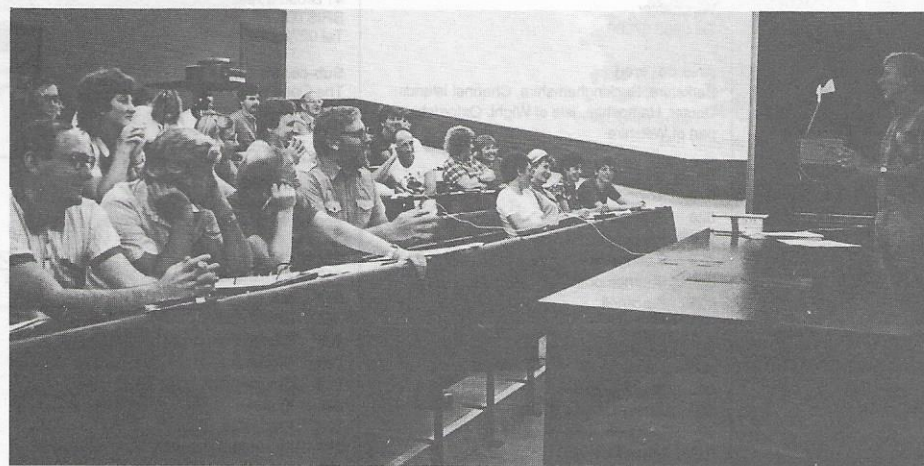
Each foundation course requires compulsory attendance at a week's summer school. So also do *Modelling with mathematics: an introduction* (TM282) and *An introduction to calculus* (MS283).



Open University study materials - high quality printed texts...



...are the heart of a multi-media teaching system...



...which includes face-to-face tuition, too.

You will be asked to pay the summer school(s) fee, which includes the cost of tuition and the board and lodging charges, by June 1990. Please note that if you take two courses in your first year you will be expected to attend and pay for two summer schools.

If you have good reasons for not attending summer school and obtain excusal (see page 8) you may not be liable to pay the fee.

Home experiment kits

Some courses require the use of home experiment kits. At foundation level the only such course is *A science foundation course* (S102).

Students are asked to take care of this equipment and return it to the University in good condition. In your registration agreement, therefore, you indemnify the University against any loss or damage that may occur, and undertake to return the kit in good time, so that it can be issued to another student the following year.

Tuition fees in subsequent years

For subsequent years of study you will be asked to pay your course tuition fees (and summer schools fees if applicable) in that academic year.

Level of costs

The level of fees for 1990 courses had not been decided when this *Guide* was printed. Current fee levels (1988) are as follows:

Initial tuition fee:	
Foundation course	£91.00
Half-credit course	£45.50

Final tuition fee:	
Foundation course	£79.00
Half-credit course	£39.50

Summer school fee	£109 a week
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Actual fee levels for 1990 will be announced as soon as possible. They are likely to be higher than those above to take account of inflation and other factors.

If you have any doubts about your ability to pay these fees we nevertheless recommend that you apply now, and then investigate ways of meeting the costs. Your Regional Enquiry Service will be able to tell you about the ways the University can help.

Fee refunds

The initial tuition fee (less an administrative charge) is refundable to applicants who withdraw after having accepted places, up to 30 September 1989. After that date refunds are at the discretion of the University. The initial tuition fee will not be refunded after the end of November 1989. Other fees are not normally refundable.

UNIVERSITY ADDRESSES

Walton Hall

The Open University's headquarters are at Walton Hall, Milton Keynes, where the central academic and administrative staff are based. The following box numbers and postcodes should be used when writing on specific matters.

Admission to the Undergraduate, Continuing Education and Postgraduate Programmes:

Central Enquiry Service
The Open University
PO Box 71
Milton Keynes MK7 6AG

Registration in the Undergraduate Programme:

The Undergraduate Admissions Office
The Open University
PO Box 48
Milton Keynes MK7 6AB

Registration in the Continuing Education Programme:

The Associate Student Central Office
The Open University
PO Box 76
Milton Keynes MK7 6AN

Registration in the Postgraduate Programme:

The Higher Degrees Office
The Open University
PO Box 49
Milton Keynes MK7 6AD

General credit exemptions and credit transfer:

Advanced Standing Office
The Open University
PO Box 80
Milton Keynes MK7 6AS

Purchase of books, films and other undergraduate course material:

Open University Educational Enterprises
12 Cofferridge Close
Stony Stratford
Milton Keynes MK11 1BY

Purchase of study packs:

Learning Materials Service Office
The Open University
PO Box 188
Milton Keynes MK7 6DH

Other correspondence unless otherwise stated in the Guide should be addressed to:

Central Enquiry Service
The Open University
PO Box 71
Milton Keynes MK7 6AG

Regional Centres and Study Centres

The University's regional structure is shown on the map opposite. Regional Centres provide local services for enquirers, applicants and students. Each student is attached to one of the thirteen Regional Centres.

When you fill in your application form you are asked to refer to the list of study centres on the following pages and choose the one most convenient for you (irrespective of where you live). The University will regard your region as that in which your study centre is located.

As demand and availability of premises vary, it may be necessary to make some changes in the study centres listed before 1989.

If you have immediate questions, however, please do not hesitate to contact the Regional Enquiry Service at your nearest Regional Centre or sub-centre.

REGION 01 LONDON

The Open University
London Region
Parsifal College
527 Finchley Road
LONDON NW3 7BG
Tel 01-794 0575

Area covered
Greater London

Study centres

008 Acton W3
002 Bloomsbury WC1
022 Carshalton
227 City (Angel) EC1
016 Cranford (Hounslow)
007 Croydon
228 Eltham SE9
010 Enfield (Southgate) N14
012 Harrow
014 Havering
001 Hendon NW4
017 Kingston
020 Mile End E1
234 New Cross SE3
233 Norwood SE19
005 Orpington
235 Paddington NW1
238 Pimlico SW1
229 Strand WC2
011 Tottenham
021 Twickenham
237 Wandsworth SW15
226 West Hampstead NW3

REGION 02 SOUTH

The Open University
Southern Region
Foxcombe Hall
Boars Hill
OXFORD OX1 5HR
Tel 0865 730731

Sub-centre

Winchester
Tel 0962 67969

Area covered

Berkshire, Buckinghamshire, Channel Islands, Dorset, Hampshire, Isle of Wight, Oxfordshire, part of Wiltshire

Study centres

025 Abingdon
026 Aylesbury
027 Banbury
028 Basingstoke
030 Bournemouth
031 Bracknell
305 Fareham
037 Farnborough
306 Guernsey CI
040 High Wycombe
303 Jersey CI
054 Maidenhead & Windsor
029 Milton Keynes
041 Newbury
042 Newport IOW

043 Oxford
044 Poole
045 Portsmouth
046 Reading
048 Salisbury
049 Slough
050 Southampton
053 Weymouth
035 Winchester
055 Witney

REGION 13 SOUTH EAST

The Open University
South East Region
St James's House
150 London Road
EAST GRINSTEAD RH19 1ES
Tel 0342 27821

Area covered

Kent, Surrey, East Sussex, West Sussex.

Study centres

004 Brighton
023 Broadstairs
032 Camberley
006 Canterbury
033 Chichester
034 Crawley
287 Dartford
292 Eastbourne
036 Ewell
291 Folkestone
018 Gillingham
038 Guildford
288 Maidstone
047 Redhill
013 St Leonards-on-Sea
051 Staines
024 Tonbridge
052 Weybridge
056 Worthing

REGION 03 SOUTH WEST

The Open University
South West Region
41 Broad Street
BRISTOL BS1 2EP
Tel 0272 289641

Sub-centre

The Open University
58/59 South Side Street
Plymouth PL1 2LA
Tel 0752 228321

Area covered

Avon, Cornwall, Devon, Gloucestershire, Somerset, Scilly Isles, most of Wiltshire

Study centres

057 Barnstaple
058 Bath
060 Bristol (Clifton)
295 Bristol (Fishponds)
063 Cheltenham
064 Chippenham
065 Exeter
066 Gloucester
067 Plymouth
068 Redruth
069 St Austell

- 071 Swindon
072 Taunton
073 Torquay
074 Weston-super-Mare
075 Yeovil

REGION 04 WEST MIDLANDS

The Open University
West Midlands Region
66-68 High Street
Harborne
BIRMINGHAM B17 9NB
Tel 021-426 1661.

Area covered

Hereford and Worcester, Shropshire, most of Staffordshire, Warwickshire, West Midlands.

Study centres

- 076 Birmingham (Harborne)
091 Birmingham (Selly Oak)
078 Coventry
079 Dudley
080 Hereford
082 Kidderminster
083 Leamington Spa
090 Newcastle under Lyme
084 Nuneaton
085 Redditch
086 Rugby
087 Shrewsbury
088 Solihull
089 Stafford
092 Sutton Coldfield
093 Telford
094 Walsall
095 Wolverhampton
096 Worcester

REGION 05 EAST MIDLANDS

The Open University
East Midlands Region
The Octagon
143 Derby Road
NOTTINGHAM NG7 1PH
Tel 0602 473072.

Area covered

Most of Derbyshire, Leicestershire, Lincolnshire, Northamptonshire, Nottinghamshire, South Humberside, part of Staffordshire (Burton-on-Trent).

Study centres

- 308 Alfreton
097 Boston
098 Burton-on-Trent
099 Chesterfield
100 Derby
101 Grantham
102 Grimsby
103 Ilkeston
104 Kettering
105 Leicester
107 Lincoln
108 Loughborough
106 Louth
109 Mansfield
114 Matlock
110 Melton Mowbray
113 Newark
111 Northampton
112 Nottingham
115 Scunthorpe
309 Stamford
116 Worksop

REGION 06 EAST ANGLIA

The Open University
East Anglian Region
Cintra House
12 Hills Road
CAMBRIDGE CB2 1PF
Tel 0223 64721.

Area covered

Bedfordshire, Cambridgeshire, Essex, Hertfordshire, Norfolk, Suffolk.

Study centres

- 117 Bedford
118 Bury St Edmunds
119 Cambridge
120 Chelmsford
121 Colchester
122 Grays
123 Great Yarmouth

- 124 Harlow
239 Hemel Hempstead
125 Hitchin
126 Huntingdon
127 Ipswich
128 King's Lynn
129 Loughton
130 Luton
131 Norwich
132 Peterborough
133 St Albans
134 Southend
135 Watford

REGION 07 YORKSHIRE

The Open University
Yorkshire Region
Fairfax House
Merrion Street
LEEDS LS2 8JU
Tel 0532 444431.

Area covered

North Humberside, North Yorkshire, South Yorkshire, West Yorkshire.

Study centres

- 240 Aireborough
136 Barnsley
137 Bradford
139 Dewsbury
140 Doncaster
141 Halifax
142 Harrogate
143 Huddersfield
144 Keighley
145 Kingston-upon-Hull
146 Leeds (Central)
245 Leeds (North)
244 Northallerton
147 Rotherham
148 Scarborough
149 Sheffield
150 Wakefield
151 York

REGION 08 NORTH WEST

The Open University
North West Region
Chorlton House
70 Manchester Road
Chorlton-cum-Hardy
MANCHESTER M21 1PQ
Tel 061-861 9823.

Area covered

Cheshire, part of Derbyshire (High Peak area), Isle of Man, Lancashire, Greater Manchester, Merseyside.

Study centres

- 325 Accrington
153 Ashton-under-Lyne
157 Blackpool
158 Bolton
162 Chester
163 Crewe
164 Douglas IoM
165 Lancaster
167 Liverpool
180 Macclesfield
168 Manchester
169 Northwich
175 Ormskirk
171 Preston
172 Rochdale
152 Sale
173 St Helens
176 Stockport
177 Warrington
179 Wigan
155 Wirral (Birkenhead)

REGION 09 NORTH

The Open University
North Region
Eldon House, Regent Centre
Gosforth
NEWCASTLE UPON TYNE NE3 3PW
Tel 091-284 1611.

Resource centres

Cumbria (Penrith)
Tel 0768 64720
Cleveland (Middlesbrough)
Tel 0642 816227

Area covered

Cleveland, Cumbria, Durham, Northumberland, Tyne and Wear.

Study centres

- 181 Ashington
251 Berwick*
182 Carlisle
183 Darlington
184 Durham
154 Furness (Dalton)
185 Gateshead
186 Hartlepool
324 Kendal
187 Newcastle
189 South Tyneside (Boldon)
190 Sunderland
191 Teesside (Middlesbrough)
193 Tynemouth (North Shields)
192 West Cumbria (Egremont)

REGION 10 WALES

The Open University in Wales
24 Cathedral Road
CARDIFF CF1 9SA
Tel 0222 397911.

Area covered

Wales

Study centres

- 263 Abergavenny
197 Abergele
194 Aberystwyth
260 Ammanford
195 Bangor (Menai Centre)
254 Barry
255 Bridgend
196 Cardiff
299 Flint
257 Harlech
259 Haverfordwest
300 Llandrindod
198 Merthyr Tydfil
199 Newport (Gwent)
262 Newtown
264 Pontypridd
201 Swansea
203 Wrexham

REGION 11 SCOTLAND

The Open University in Scotland
60 Melville Street
EDINBURGH EH3 7HF
Tel 031-226 3851.

Sub-centre

The Open University
2 Park Gardens
GLASGOW G3 7YE
Tel 041-332 4364.

Area covered

Scotland

Study centres

- 204 Aberdeen
689 Arran*
205 Ayr
691 Benbecula*
692 Campbeltown*
268 Clydebank
688 Cowal and Bute*
270 Cumbernauld
687 Dornoch*
206 Dumfries
207 Dundee
209 Edinburgh (Napier)
274 Elgin
211 Falkirk
693 Fort William*
686 Fraserburgh*
275 Galashiels
315 Glasgow (College of Technology)
316 Glasgow (Queen's College)
318 Glasgow (Langside)
276 Greenock
217 Hamilton
215 Inverness
690 Islay and Jura*
216 Kirkcaldy
694 Kirkwall* (Orkney)
695 Lerwick* (Shetland)
696 Newton Stewart*
697 Oban*
218 Paisley
279 Perth

- 698 Skye*
219 Stirling
699 Stornoway*
281 Thurso

REGION 12 NORTHERN IRELAND

The Open University in Northern Ireland
40 University Road
BELFAST BT7 1SU
Tel 0232 245025.

Area covered

Northern Ireland

Study centres

- 220 Armagh
221 Ballymena
223 Belfast
282 Coleraine
320 Enniskillen
224 Londonderry
319 Newtownabbey
222 Newtownards
283 Omagh

OVERSEAS SCHEMES

The Regional Centres indicated below are responsible for administering these schemes. Study centres in West Germany and Cyprus are available only for those students admitted under the special scheme for members of the Services.

West Germany

(administered by Region 04)
410 Bielefeld
411 Hohn
412 Rheindahlen
413 Berlin

Cyprus

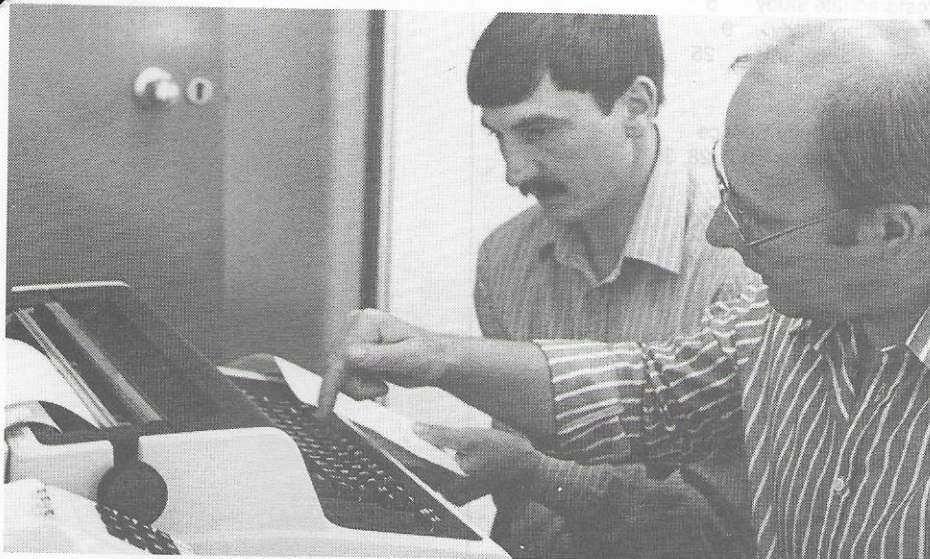
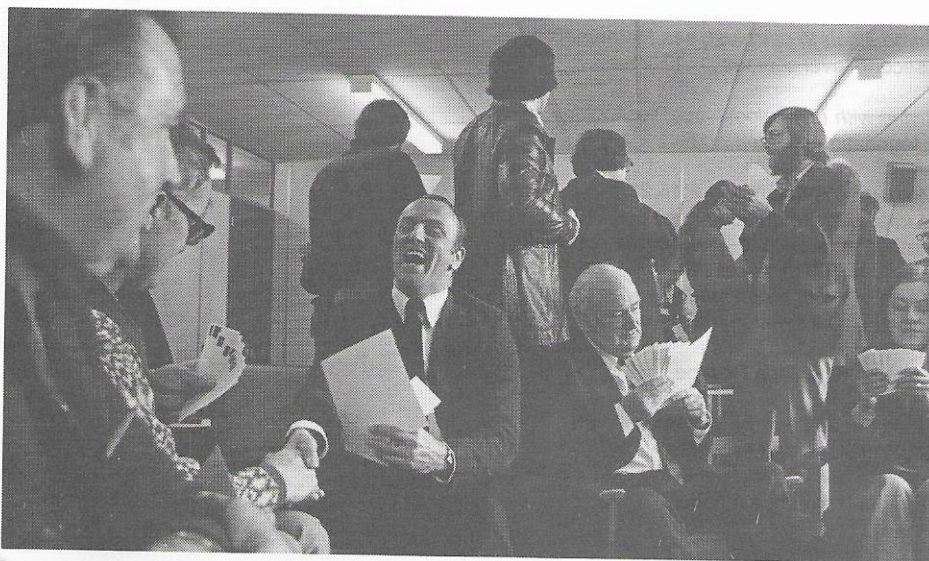
(administered by Region 07)
400 Akrotiri
401 Ayios Nikolaos

Belgium and Luxembourg

(administered by Region 09)

A special scheme for residents of Belgium and Luxembourg enables them to study foundation courses and most post-foundation courses as associate students, and to qualify for the BA degree. Applicants to this scheme should not use the standard application form which accompanies this Guide but contact the North Regional Centre in Newcastle for further information.

* Location centres with limited facilities.



Study centres in every part of the UK enable students and tutors to meet for a variety of activities. Top, role-playing exercises at a psychology day school. Centre, using a computer terminal. Bottom, a tutorial meeting; these are held either in the evenings or on Saturdays.

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